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**SPECIFICATIONS AND PLANS
FOR READY-CUT LOOKOUT HOUSE.**

**UNITED STATES DEPARTMENT OF AGRICULTURE
FOREST SERVICE**

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READY-CUT LOOKOUT HOUSE

D-6 STANDARD

SPECIFICATIONS,

MATERIAL LISTS

and

INSTRUCTIONS

C O N T E N T S

Pages

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These Specifications, Material Lists and Instructions should be used in connection with Plans for Ready-cut Lookout House, revised January 1922, Sheets Nos. A to L.

SPECIFICATIONS FOR MATERIAL FOR HOUSE

All lumber parts to be cut accurately, ready to fit together, as per attached plans Sheets A to L and cutting list, pages 5 to 10.

The frame shall be No. 3 clear Douglas fir or better, reasonably straight-grained, free from knots or defects affecting strength, kiln dried, and shall be surfaced on four sides to given dimensions. The floors, siding, ceiling ship-lap, doors and window casings and trimmings and all other finish to be No. 2 or better Douglas fir, kiln dried.

The pieces to be marked or numbered with blue keel in accordance with the plans and cutting lists.

All parts and material to be done up in bundles weighing not more than forty pounds each of suitable size and shape for transportation by pack horse. As far as it is practical to do so, each bundle should be made up of parts and material for only one operation. For instance, bundles of sill material (Figs. 1 and 2, Sheet B) should not contain roofing material (shown in Fig. 14, Sheet D) in them. All bundles are to be plainly numbered in red. The numbers to start with bundles of material used in the first operation, Figs. 1 and 2, Sheet B, and run consecutively through all operations shown in Figs. 1 to 36, in sequence, so that the number on the last bundle will be the total number of bundles. All pieces in each bundle to be securely nailed together with cleats or bound together in two or more places, with not less than two wraps at each place of #14 or #16 iron wire.

All small pieces of lumber such as window shutter buttons, window sill cleats (Figs. 31 and 33, Sheet K), and all hardware, screws, etc., to be boxed in substantial boxes. No box when packed should weigh over 40 lbs. nor be larger than about 12"x14"x3'.

Paint to be boxed by itself and marked "Paint."

Windows to be done up in bundles of twos (there will be one odd window), securely nailed or screwed together, with both sides boarded over solid to prevent glass from breaking.

In the event that any necessary portion of the house is missing, the local forest officer shall purchase or have made the missing parts and the cost thereof shall be deducted from the contract price of the building.

Glass to be double strength or 21 ounce, AA glass.

All material for each house shall be delivered at one time f.o.b. cars at point of manufacture, within fifteen days after order is placed.

Flashing to be made of a good grade of #28 galvanized iron,
as per detail Figs. 12A and 12B, Sheet D.

Special fixtures to be made accurately according to details
shown.

Strand cable to be standard galvanized guy cable.

All other material to be best standard grade on the market.

CUTTING LIST OF LUMBER

SILLS - Figure 1 - Sheet B

15 Pieces

1st Operation

| | | | |
|----------|--|---------------------|--------------------|
| 8 Pieces | $3\frac{1}{2}" \times 3\frac{1}{2}" \times 6'11\frac{1}{4}"$ | Halved at both ends | Mark Fig.1 Piece 1 |
| 2 " | " | $5'8\frac{1}{2}"$ | " " " " 2 |
| 5 " | $1\frac{3}{4}" \times 6" \times 18"$ | | " " " " 3 |

JOISTS - Figure 2 - Sheet B

32 Pieces

2nd Operation

| | | |
|-----------|--|------------------------------|
| 14 Pieces | $1\frac{1}{2}" \times 3\frac{1}{2}" \times 6'0"$ | Mark Fig.2 Piece 1 |
| 18 " | " | $0'22\frac{1}{4}"$ " " " " 2 |

SUB-FLOOR - Figure 3 - Sheet B

52 Pieces

3rd Operation

| | | | |
|-----------|----------------|-----------------|--------------------|
| 22 Pieces | $1" \times 8"$ | shiplap 6' long | Mark Fig.3 Piece 1 |
| 30 " | " | " 4' " | " " " " 2 |

FINISHED FLOOR SECTION - Fig.4 - Sheet B

107 Pieces

4th Operation

| | | | |
|-----------|----------------|---------------------------------|--------------------|
| 44 Pieces | $1" \times 4"$ | Flooring $5'8\frac{1}{2}"$ long | Mark Fig.4 Piece 1 |
| 63 " | " | " $3'9\frac{5}{8}"$ long | " " " " 2 |

MAIN FLOOR FRAME - Figs. 5 & 6 - Sheet C

91 Pieces

5th Operation

| | | | |
|----------|--|---------------------------------|-------------------------|
| 4 Pieces | $1\frac{1}{2}" \times 3\frac{1}{2}" \times 6'0"$ | Bottom Plate | Mark Figs.5 & 6 Piece 1 |
| 4 " | " | $5'8\frac{1}{2}"$ " " | " " " " 2 |
| 4 " | " | $6'0"$ Top Plate | " " " " 3 |
| 8 " | " | $5'8\frac{1}{2}"$ " " | " " " " 4 |
| 4 " | " | $3'1\frac{3}{4}"$ " " | " " " " 5 |
| 4 " | " | $2'10\frac{1}{4}"$ Top " | " " " " 6 |
| 12 " | $3\frac{1}{2}" \times 3\frac{1}{2}" \times 6'10"$ | Posts | " " " " 7 |
| 4 " | " | " " framed | " " " " 8 |
| | | as per detail on Sheet C. | |
| 15 " | $1\frac{1}{2}" \times 3\frac{1}{2}" \times 32\frac{1}{2}"$ | Header | " " " " 9 |
| 16 " | " | $30\frac{3}{4}"$ " | " " " " 10 |
| 7 " | " | $3'4\frac{1}{8}"$ Bottom Braces | " " " " 11 |
| | | Miter 8-11 | |
| 1 " | $1\frac{1}{2}" \times 3\frac{1}{2}" \times 3'2\frac{3}{8}"$ | " " | " " 6 " 12 |
| | | Miter 8-12 | |
| 7 " | $1\frac{1}{2}" \times 3\frac{1}{2}" \times 2'10\frac{1}{8}"$ | Top Brace | " " 5 & 6 " 13 |
| | | Miter 4 - $12\frac{1}{2}"$ | |
| 1 " | $1\frac{1}{2}" \times 3\frac{1}{2}" \times 2'8\frac{5}{8}"$ | Top Brace | " " 6 " 14 |
| | | Miter 4 - $11\frac{1}{4}"$ | |

CUTTING LIST OF LUMBER

MAIN FLOOR SHEATHING - Fig.7 - Sheet C

168 Pieces

6th Operation

| | | | |
|----|--------|------------------------------------|--------------------|
| 84 | Pieces | 1"x8' Shiplap - 34" long sheathing | Mark Fig.7 Piece 1 |
| 84 | " | " " " 15 $\frac{1}{2}$ " " " | " " " " 2 |

TOWER JOISTS AND FLOOR - Fig.8 - Sheet C

30 Pieces

7th Operation

| | | | |
|---------------------------------|--------|--|--------------------|
| 2 | Pieces | 1 $\frac{1}{2}$ "x5 $\frac{1}{2}$ "x12'0" Top Joist, Miter 10-12 | Mark Fig.8 Piece 1 |
| 2 | " | " " " Underneath Joist | " " " " 2 |
| Framed as per detail on Sheet C | | | |
| 4 | " | 1 $\frac{1}{2}$ "x3 $\frac{1}{2}$ "x5'9" Floor Joists | " " " " 3 |
| 22 | " | 1"x4" Flooring 5'5 $\frac{1}{2}$ " long | " " " " 4 |

TOWER FRAME - Figs.9-10-11-12, Sheets C & D

48 Pieces

8th Operation

| | | | |
|--------------------------------------|--------|--|---------------------|
| 4 | Pieces | 3 $\frac{1}{2}$ "x3 $\frac{1}{2}$ "x6'5" Posts | Mark Fig.12 Piece 1 |
| Framed as shown detail Fig.12 | | | |
| 4 | " | 3 $\frac{1}{2}$ "x3 $\frac{1}{2}$ "x6'0" Top Plates | " " 11 " 2 |
| Framed as shown detail Fig.11 | | | |
| 8 | " | 1 $\frac{1}{2}$ "x3 $\frac{1}{2}$ "x1'9" Under bottom header | " " 9 & 10 " 3 |
| 4 | " | 3 $\frac{1}{2}$ "x5 $\frac{1}{2}$ "x5'5" Bottom Header | " " 12 " 4 |
| 12 | " | 1 $\frac{1}{2}$ "x3 $\frac{1}{2}$ "x0'3" Over Top Header | " " " " 5 |
| 4 | " | " " 5'5" Top Header | " " " " 6 |
| 4 | " | 2 $\frac{3}{4}$ "x3 $\frac{1}{2}$ "x5'5" On Top of Bottom Header (See "block under sill" Fig.19D on Sheet E) Bevel one side 6 1/8 - 12 | " " " " 7 |
| 4 | " | 1 $\frac{1}{2}$ "x3 $\frac{1}{2}$ "x7'1 $\frac{1}{4}$ " Tower Brace | " " 10 " 8 |
| Miter two ends 7 $\frac{1}{2}$ - 12 | | | |
| 4 | " | 1 $\frac{1}{2}$ "x3 $\frac{1}{2}$ "x6'2 $\frac{3}{4}$ " Tower Braces | " " 9 " 9 |
| Miter two ends 11 $\frac{1}{2}$ - 15 | | | |

ROOF RAFTERS - Fig.13 - Sheet D

45 Pieces

9th Operation

| | | | |
|---------------------------|--------|---|---------------------|
| 4 | Pieces | 1 $\frac{1}{2}$ "x3 $\frac{1}{2}$ "x6'2" Hip Rafter | Mark Fig.13 Piece 1 |
| See detail Fig.13 Sheet D | | | |
| 16 | " | " " 4'11" Common Rafters | " " " " 2 |
| See detail Fig.13 Sheet D | | | |
| 8 | " | " " 2'6 $\frac{3}{4}$ " Jack Rafter | " " " " 3 |
| See detail Fig.13 Sheet D | | | |
| 4 | " | " " 5'8" Hip Rafters | " " " " 4 |
| See detail Fig.14 Sheet D | | | |
| 4 | " | " " 4'8 $\frac{1}{4}$ " Common Rafters | " " " " 5 |
| See detail Fig.14 Sheet D | | | |
| 8 | " | " " 2'5 $\frac{1}{4}$ " Jack Rafters | " " " " 6 |
| See detail Fig.14 Sheet D | | | |
| 1 | " | 3 $\frac{1}{2}$ "x3 $\frac{1}{2}$ "x2'5 $\frac{1}{2}$ " Roof Pole | " " " " 7 |
| See detail Fig.14 Sheet D | | | |

CUTTING LIST OF LUMBER

ROOF SHEATHING - Fig.14 - Sheet D

288 Pieces

10th Operation

| | |
|--|-----------------|
| 8 Sections of 1x4 ($\frac{3}{4}$ x $3\frac{1}{4}$ actual) ceiling for main roof | |
| (18 pieces in 5'8 $\frac{3}{4}$ " wide at bottom | Mark Fig. 14 |
| each section) 2'0 $\frac{3}{4}$ " " " top | Pieces 1 to 18 |
| by 4'10 $\frac{1}{2}$ " high | |
| 4 Sections of 1x4 ceiling for main roof | |
| (18 pieces in 1'10 $\frac{3}{8}$ " wide at bottom | Mark Fig. 14 |
| each section) 1'10 $\frac{3}{8}$ " " " top | Pieces 19 to 36 |
| by 4'10 $\frac{1}{2}$ " high | |
| 4 Sections of 1x4 ceiling for tower roof | |
| (18 pieces in 6'7" wide at bottom | Mark Fig. 14 |
| each section) 0'3 $\frac{1}{2}$ " " " top | Pieces 37 to 54 |
| by 4'7" high | |

SIDING - Figs. 15 & 16 - Sheet D

60 Pieces

11th Operation

| | | |
|----------------------------------|-------------------|---------|
| 29 Pieces 1x6 V Rustic 6'0" Long | Mark Figs.15 & 16 | Piece 1 |
| 32 " " " 3'1 $\frac{3}{4}$ " " | " " " | 2 |
| 16 " " " 5'8 $\frac{1}{2}$ " " | " " " | 3 |
| 3 " " " 3'0" (extra) | " " 16 | 4 |

MAIN CORNICE, WINDOW TRIM & CORNICE BOARDS - Fig.17. Sheet E

Cornice

12th Operation

48 Pieces

| | | |
|---|-------------|---------|
| 8 Pieces $\frac{3}{4}$ "x8"x6'1 $\frac{1}{2}$ " Frieze mitered one end | Mark Fig.17 | Piece 1 |
| cut square end to fit on job | | |
| 4 " $\frac{3}{4}$ "x7 $\frac{1}{4}$ "x8'0" Placer | " " " " | 2 |
| 4 " " 6'0" " | " " " " | 3 |
| 8 " $\frac{3}{4}$ "x1 $\frac{3}{8}$ "x6'5/8" Fillet | " " " " | 4 |
| 8 " $\frac{3}{4}$ "x3 $\frac{1}{2}$ "x6'10" Facia mitered | " " " " | 5 |
| one end cut square on job | | |
| 8 " $\frac{1}{4}$ round, 6'3" long mitered one end | " " " " | 6 |
| 8 " $\frac{1}{4}$ " 6'9 $\frac{1}{2}$ " " cut to fit on job | " " " " | 7 |
| NOTE: Tie $\frac{1}{4}$ round in bundles and put mark number on tag tied to bundle. | | |

TOWER CORNICE - Fig.18 on Sheet E

20 Pieces

13th Operation

| | | |
|--|-------------|---------|
| 4 Pieces $\frac{3}{4}$ "x3 $\frac{1}{2}$ "x6'9 $\frac{1}{2}$ " Facia | Mark Fig.18 | Piece 1 |
| Mitered both ends | | |
| 4 " $\frac{3}{4}$ "x3 $\frac{1}{2}$ "x6'4 $\frac{1}{2}$ " Placer | " " " " | 2 |
| 4 " " 6'1 $\frac{1}{2}$ " Frieze | " " " " | 3 |
| 4 " $\frac{1}{4}$ round 6'3" long, mitered both ends | " " " " | 4 |
| 4 " $\frac{1}{4}$ " 6'9 $\frac{1}{2}$ " cut to fit on job | " " " " | 5 |
| NOTE: Tie $\frac{1}{4}$ round in bundles and mark numbers on tags tied to bundles. | | |

CUTTING LIST OF LUMBER

WINDOW SILLS - Figs. 19 & 19a - Sheet E

13 Pieces

14th Operation

| | | | | |
|----------|---|--|---------------------|---|
| 4 Pieces | 1 | 3/8"x8 1/2"x6'4 1/8" Window Sill | Mark Fig.19 Piece 1 | |
| | | Main floor, cut as shown Fig.19 | | |
| 3 | " | 1 3/8"x8 1/2"x6'4 1/8" Window Sill | " " " " | 2 |
| | | Main floor, cut as shown Fig.19 | | |
| 1 | " | 1 3/8"x8 1/2"x3'4 1/4" Window Sill | " " " " | 3 |
| | | Main floor, cut as shown Fig.19 | | |
| 1 | " | 1 3/8"x4 1/4"x0'7 3/4" Extension of sill | " " " " | 4 |
| | | at door corner, cut as shown Fig.19 | | |
| 4 | " | 1 3/8"x6"x6'6" Window Sill | " " 19A " | 1 |
| | | Tower, cut as shown Fig.19A | | |

MAIN FLOOR WINDOW TRIM AND CASING

Fig.20 on Sheet F and Fig.20A on Sheet G

157 Pieces

15th Operation

| | | | |
|----------|---|---------------------|------|
| 7 Pieces | 3/4"x1 5/8"x2'8 1/2" outside bottom | Mark Fig.20 Piece 1 | |
| | stop for corner windows | | |
| | Beveled 1 edge 1 1/4" - 4 as per detail sheet G | | |
| 8 | " 3/4"x1 5/8"x2'6 3/4" outside bottom | Mark Fig.20 | " 2 |
| | stop for middle windows, beveled | | |
| | both edges 1 1/4" - 4 | | |
| 7 | " 3/4"x1 3/8"x2'8 1/2" outside top | " " 20A | " 3 |
| | stop for corner windows | | |
| 8 | " 3/4"x1 3/8"x2'6 3/4" outside top stop | " " " " | 4 |
| | for middle windows | | |
| 30 | " 3/4"x1 3/8"x3'5 3/8" outside stop | " " " " | 5 |
| 7 | " 3/4"x3/4"x2'8 1/2" inside bottom stop | " " " " | 6 |
| | for cor.windows, beveled 1 edge 1 1/4" - 4 | | |
| 8 | " 3/4"x3/4"x2'6 3/4" inside bottom stop | " " " " | 7 |
| | for middle windows, bev. 1 edge 1 1/4" - 4 | | |
| 7 | " 3/4"x3/4"x2'8 1/2" inside top stop | " " " " | 8 |
| | for corner windows | | |
| 8 | " 3/4"x3/4"x2'6 3/4" inside top stop | " " " " | 9 |
| | for middle windows | | |
| 30 | " 3/4"x3/4"x3'4 1/2" inside side stop | " " " " | 10 |
| 12 | " 3/4"x4"x3'7 1/2" window casing | " " 20 | " 11 |
| | Beveled on one end 1 1/4" - 4 | | |
| 4 | " 3/4"x3 3/4"x3'7 1/2" corner window casing | " " " " | 12 |
| | Beveled on one end 1 1/4" - 4 | | |
| 4 | " 3/4"x4 1/2"x3'7 1/2" corner window casing | " " " " | 13 |
| | Beveled on one end 1 1/4" - 4 | | |
| 1 | " 3/4"x5 1/4"x2'9 1/2" Door casing below | " " 15 & 16 | " 14 |
| | window sill | | |
| 4 | " 3/4"x5 1/4"x2'9 1/2" corner boards | " " " " | " 15 |
| | below window sill | | |
| 4 | " 3/4"x6"x2'9 1/2" corner boards | " " " " | " 16 |
| | below window sill | | |
| 8 | " 1/4" round 6'3" long under window sill | " " " " | " 17 |

NOTE: Tie 1/4" round in bundle and mark No. on tag.

CUTTING LIST OF LUMBER

TOWER WINDOW TRIM & CASING - Fig.21 on Sheet F & 21A on Sheet H

16th Operation

16 Pieces

| | | | |
|----------|--|----------------------|---|
| 4 Pieces | $\frac{3}{4}$ "x2 $\frac{1}{4}$ "x5'5" bottom stop | Mark Fig.21, Piece 1 | |
| | Beveled both edges 6 1/8 - 12 as per detail | | |
| 4 Pieces | $\frac{3}{4}$ "x1 5/8"x5'5" top stop | Mark Fig.21, " | 2 |
| 8 " | " 3'3/4" side stops | " " " " | 3 |
| | Beveled on one end 6 1/8 - 12 | | |

DOOR AND THRESHOLD - Fig. 22, Sheet F.

12 Pieces

Miscellaneous Operation

| | | | |
|----------|--|--------------|--|
| 5 Pieces | $\frac{3}{4}$ "x5 $\frac{1}{2}$ "x6'4 $\frac{1}{2}$ " (1x6) T & G Flooring | Mark Fig. 22 | |
| 1 " | $\frac{3}{4}$ "x4 $\frac{3}{4}$ "x6'4 $\frac{1}{2}$ " T & G Flooring | " " " | |
| | (1x6 flooring ripped to 4 $\frac{3}{4}$) | | |
| 3 " | 1"x6"x2'8 $\frac{1}{4}$ " | " " " | |
| 2 " | 1"x6"x2'9" Mitered 2 ends 5 $\frac{1}{2}$ x5 $\frac{1}{2}$ | " " " | |
| 1 " | 1 $\frac{1}{2}$ "x6"x3'5 $\frac{1}{2}$ " beveled as per detail | " " 22 A | |
| | Fig. 22A, Sheet F. | | |

LOWER FLOOR SHUTTER - Fig. 32, Sheet J.

150 Pieces

Miscellaneous Operation

Shutters for 7 corner windows

| | | | |
|-----------|--|--------------|--|
| 49 Pieces | $\frac{3}{4}$ "x5 $\frac{1}{2}$ "x2'8 $\frac{1}{4}$ " (1"x6") T & G Flooring | Mark Fig. 32 | |
| 7 " | $\frac{3}{4}$ "x4 $\frac{3}{4}$ "x2'8 $\frac{1}{4}$ " " " " | " " " | |
| 14 " | $\frac{3}{4}$ "x5 $\frac{1}{2}$ "x3'5 $\frac{1}{2}$ " S4S | " " " | |

Shutters for 8 center windows

| | | | |
|------|--|-------|--|
| 56 " | $\frac{3}{4}$ "x5 $\frac{1}{2}$ "x2'6 $\frac{1}{2}$ " (1"x6") T & G Flooring | " " " | |
| 8 " | $\frac{3}{4}$ "x4 $\frac{3}{4}$ "x2'6 $\frac{1}{2}$ " (1"x6") " " | " " " | |
| 16 " | $\frac{3}{4}$ "x5 $\frac{1}{2}$ "x3'5 $\frac{1}{2}$ " S4S | " " " | |

TOWER SHUTTERS - Fig. 23, Sheet F.

44 Pieces

Miscellaneous Operation

| | | | |
|-----------|---|--------------|--|
| 28 Pieces | $\frac{3}{4}$ "x7"x5'4 $\frac{1}{2}$ " Shiplap | Mark Fig. 23 | |
| 4 " | $\frac{3}{4}$ "x3 $\frac{1}{2}$ "x5'4 $\frac{1}{2}$ " | " " " | |
| 12 " | $\frac{3}{4}$ "x5 $\frac{1}{2}$ "x3'1" S4S Bevel 1 end 6 $\frac{1}{2}$ - 12 | " " " | |

BLOCKS UNDER MAIN FLOOR WINDOW SILLS - Sheet K.

| | | | |
|-----------|--|---------------|--|
| 35 Blocks | 1 $\frac{1}{4}$ "x3 $\frac{1}{2}$ " made as shown in Fig. 33, Sheet K. | Mark Fig. 33. | |
|-----------|--|---------------|--|

CUTTING LIST OF LUMBER

SHUTTER BUTTONS - Fig. 31, Sheet K.

90 Pieces

Miscellaneous Operation

90 Hardwood buttons made as per detail Fig. 31, Mark Fig. 31
Sheet K.

CLEATS FOR LIGHTNING CONDUCTORS, Fig. 30A, Sheet J.

Miscellaneous Operation

100 Pieces

100 Hardwood cleats made as per detail Fig. 30A, Mark Fig. 30A
Sheet J.

FIRE FINDERS - Fig. 26, Sheet I.

13 Pieces

Miscellaneous Operation

| | | |
|----------|--|--------------|
| 2 Pieces | 1"x11"x2'11" | Mark Fig. 26 |
| 1 " | 1"x13"x1'10" | " " " |
| 2 " | $\frac{3}{4}$ "x3 $\frac{1}{2}$ "x1'9 $\frac{1}{2}$ " | " " " |
| 2 " | " 0'11" | " " " |
| 4 " | $\frac{3}{4}$ "x2"x3'1 $\frac{1}{2}$ " Cut both ends 8 - 12 Halved together at center | " " " |
| 2 " | 1 $\frac{1}{2}$ "x3 $\frac{1}{2}$ "x0'11" | " " " |

SHELVING - Fig. 25, Sheet I.

21 Pieces

Miscellaneous Operation

| | | |
|----------|--|--------------|
| 6 Pieces | $\frac{3}{4}$ "x11 $\frac{1}{4}$ "x5'7 $\frac{3}{4}$ " Mitered one end 12 - 12 | Mark Fig. 25 |
| 3 " | $\frac{3}{4}$ "x10"x3'0" " two ends 12 - 12 | " " " |
| 12 " | $\frac{3}{4}$ "x5 $\frac{1}{2}$ "x1'3" | " " " |

EXTRA PIECES

12 Pieces

Miscellaneous Operation

| | | |
|----------|--|--------------|
| 6 Pieces | 1 $\frac{1}{2}$ "x3 $\frac{1}{2}$ "x7' long | Mark "Extra" |
| 1 " | $\frac{3}{4}$ "x11"x7' " | " " |
| 2 " | $\frac{3}{4}$ "x3 $\frac{1}{4}$ "x7' " (Ceiling) | " " |
| 1 " | $\frac{5}{8}$ "x5"x7' " (Rustic) | " " |
| 2 " | $\frac{3}{4}$ "x4"x7' " | " " |

LADDER - Sheet F.

8 Pieces

| | | |
|----------|---|--------------|
| 2 Pieces | 1 $\frac{1}{2}$ "x3 $\frac{1}{2}$ "x8'1 $\frac{1}{2}$ ", Mitered both ends 4 $\frac{1}{2}$ - 12 | Mark Fig. 24 |
| 6 " | $\frac{3}{4}$ "x2 $\frac{1}{2}$ "x1'6" steps | " " " |

OTHER MATERIAL FOR HOUSE

(not including material for bed and table, wire for lightning conductors or anchor bolts)

- 7 Windows $32\frac{1}{2}" \times 42\frac{1}{2}"$ corner windows main floor, Sheets F & G
- 8 " " $30\frac{3}{4}" \times 42\frac{1}{2}"$ center " " " " F & G
- 8 One light sash $32\frac{1}{2}" \times 37\frac{1}{8}"$ Tower windows " F & H
- 500 Sq. ft. 1 ply roofing paper "Higrade" or better
- 2500 *A* Kiln dried red cedar shingles
- 120 Galvanized iron hip shingles (60 to leave tie wire for lightning conductor attached) See Fig. 30B, Sheet J.
- 4 Pieces #28 gauge galvanized iron flashing $10\frac{1}{2}" \times 5'4"$ bent as shown in Fig. 12B, Sheet D.
- 8 Pieces corner flashing for tower corner posts made of 28 gauge galvanized iron as shown in Fig. 12A, Sheet D.
- 4 4" T Hinges for ladder and trap door in tower floor
- 12 8" T " galvanized for tower shutters
- 3 8" T " " " door
- 8 #604 $\frac{1}{2}$ $3\frac{1}{2}" \times 3\frac{1}{2}"$ Butts (hinges)
- 1 8" hinge hasp for door
- 1 #3 Thumb latch for door
- 2 #365 Barrel bolts for top and bottom of door
- 16 #02161 Brass casement fastener (any finish) for tower windows (two for each)
- 4 Corner angle irons (See Fig. 34, Sheet K)
- 8 $6\frac{1}{2}" \times \frac{1}{2}"$ machine bolts with one cut washer each
- 200 ft. $\frac{3}{8}"$ galvanized seven strand guy cable
- 20 $\frac{3}{8}"$ galvanized Crosby clips

4 3/4" galvanized turnbuckles; shackle to eye
 8 4 1/2"x1" lag screws, screw eyes with 3/4" eye, See Fig.23A, Sheet F.
 8 5"x1 1/2" eye bolts with washers, See Fig. 23A, Sheet F.
 8 Pieces 1/2" round iron bent and bored as shown in Fig.23A, Sheet F.
 1 gross 2"x1 1/4" stove bolts
 1 " 1/4" cut washers
 2 doz. 1"x#9 F. H. screws for ladder and trap door hinges
 11 " 1 1/2"x#11 F. H. screws for 8" T hinges
 4 " 1"x#9 F. H. screws for 3 1/2"x3 1/2" butts
 8 " 1 1/2"x#11 R. H. blue screws for shutter buttons
 10 lbs. 20d common nails
 20 " 16d " "
 5 " 8d " "
 45 " 6d barb box "
 7 " 8d finish nails
 2 " 4d " "
 12 " 3d blue shingle nails
 3 gals. outside white paint
 2 " green shingle stain
 1 " tobacco brown inside stain
 1 " Creosote (for sills)
 1/2 pint can aluminum paint

ERECTION INSTRUCTIONS

Tools

List of tools that will be needed:

| | | |
|----------------------------|-----------------------|----------------------|
| 1 pr. 8" pliers | 1 cross cut saw | 1 large square |
| 1 jack plane | 1 rip saw | 1 small " |
| 1 hand ax | 1 small monkey wrench | 1 screw driver |
| 1 level | 1 pr. tin snips | 1 5/8" auger bit |
| 1 brace | 2 1/8" drill bits | 1 3 1/2" paint brush |
| 1 long 1/2" ship auger bit | 1 1/4" " " | 1 2" " " |
| 1 pr. connectors | 2 hammers | 1 1/2" " " |

Necessary tools for rock work, leveling ground for house, setting building anchors, etc.

Packing

Pack material to the house location in following order:

Boxes of material (all small pieces of lumber
(liable to be lost if bundled), hardware,
paint, etc., are boxed.)

Lumber bundles (starting with bundle #1)

Windows

Furniture, etc.

Plan details of house with explanatory notes are shown
on blueprint sheets A to L inclusive.

Operation 1 - Sheet B

Give sills and sill blocks two coats of creosote before they are put in place.

Framing Operations

Particularly Figs. 5, 6, 8, 9, 10, 12 and 13. Sheets C & D. All timbers, braces, roof rafters, etc., must be thoroughly nailed at all places. Spike holes in ends of braces, rafters, joists, studding, etc., wherever necessary to prevent timber splitting.

Flashing

See Figs. 13A and 12B, Sheet D. Strip between tower joists (12B, Sheet D) should be nailed in place on top of block under tower sill (see Fig. 19D, Sheet E).

Flashing for the corner joists come made up in pairs to fit around posts. These should be thoroughly nailed and painted carefully at edges.

Door

Fig. 22, Sheet F. Paint tongue and groove of each board as door is put together, and paint entire door as soon as possible after it is finished. Bolts are furnished for top and bottom of door (outside) with hole for bolt in door stop. These are intended to be put on and used to prevent door warping. Keep it shut tight while building is not occupied.

The bolts are to put on outside of door as shown in Sheet A. Used when house is closed for the winter to prevent door from warping.

Painting

Roof, green shingle stain; body outside two coats white; inside one coat brown stain.

Guying

Note: If eye bolts are used the material is to be secured locally.

The sides of the building may be exposed to a 7,000 lb. wind strain. Therefore, it is important that the building be thoroughly guyed.

Anchor

Eye bolts should be 1" iron; preferably in solid rock. See Fig. 29, Sheet I. If a "dead man" or large rock is used for anchor, be sure that it will stand an eight or ten thousand pound pull. It is very important that the guys are kept tight. Turnbuckle threads should be oiled to facilitate turning. The angle irons (see Fig. 34, Sheet K) are used on the corners of the building to prevent guy cable cutting into wood.

If the building will be exposed to windstorms of unusual severity, put in anchor bolts around the frame (see Fig. 27, Sheet I). The method of attaching guy to building at tower post is shown in Fig. 28, Sheet I.

Shutters

Main floor shutters should be piled and wired together to prevent blowing away during summer, and the tower shutter rod fasteners put in place to hold shutters down on roof. When the tower shutters are closed at end of season, put the rods inside of tower. If left banging outside, wind may cause them to injure roof or window casing. All shutters should fit in tight. If necessary, put wedge under buttons.

NOTE: The windows should be examined as soon as they are packed up to the house so that if there are any broken panes there will be time to get new glass on the job before it is finished.

FURNITURE

Bed

Details of bedstead are shown on Sheet K.

A good three-quarter mattress should be provided, or, on account of lightning hazard, rope is used as shown instead of metal springs.

Table

Details of table shown on Sheet K.

It is planned that one table as shown on Sheet K is sufficient. If work shelf for preparing meals, etc., is desired, it should be attached below level of window sill to the studding.

Stove

A wood stove has its dangers if there is any lightning hazard. The 3-burner "Perfection" coal-oil stove may be safer. The size is 17"x34"x30" high, with the standard legs furnished. These are 12" long and should be either cut to 6" or removed altogether so that the top of the stove will not be above the window level. This size stove weighs 51 lbs. crated. A 2-burner "Perfection" oven is recommended; with the door open it will serve as a very good heater. It is 14"x21"x18", and weighs 27 lbs. crated.

Chairs

One straight and one easy chair suggested. They should have a seat 18" from the floor, as the windows on the lower floor are planned to give the proper angle of deflection for line of vision when a chair of this height is used.

MATERIAL FOR TABLE AND BEDSTEAD

Lumber for Table - See Sheet L

11 Pieces

Miscellaneous Operation

| | | | |
|----------|-------------------------------------|-----------------------------|-------------|
| 4 Pieces | 2 $\frac{3}{4}$ "x2 $\frac{3}{4}$ " | 2'2" table leg cut tapering | Mark Fig.36 |
| 2 " | 1"x4 $\frac{1}{2}$ " | 4' table sides cut as shown | " " " |
| 2 " | 1"x4 $\frac{1}{2}$ " | 2'8" table sides | " " " |
| 3 " | 1"x11" | 4' table top | " " " |

Lumber for Bedstead - See Sheet K.16 Pieces

Miscellaneous Operation

| | | | | | |
|---|--------|---|-----------------------------|------|--------|
| 2 | Pieces | $1\frac{1}{2}$ "x $5\frac{1}{2}$ "x6'6" | Sides of bed bored as shown | Mark | Fig.35 |
| 2 | " | $1\frac{1}{2}$ "x $5\frac{1}{2}$ "x3'4" | Ends of bed bored | " | " " |
| 4 | " | 1"x $5\frac{1}{2}$ "x20" | Legs of bed cut | " | " " |
| 4 | " | 1"x $5\frac{1}{2}$ "x20" | As shown | " | " " |
| 4 | " | 1"x $5\frac{1}{2}$ "x1'8" | Braces cut miter | " | " " |

Other Material

| | | |
|-------------------------------------|--------------------------|---------------|
| 140 ft. of $\frac{1}{4}$ " | manila rope for bedstead | Tag "For Bed" |
| 8 $\frac{3}{8}$ "x $4\frac{1}{2}$ " | machine bolts for table | " " Table |
| 8 $\frac{3}{8}$ "x3" | " " " bedstead | " " Bed |
| 8 $\frac{3}{8}$ "x8" | log screws for bedstead | " " " |
| 48 $\frac{3}{8}$ " | cut washers | " " " |
| 1 lb. | 10d finish nails | |

LIGHTNING PROTECTION

The most efficient type of lightning arrester is known as the "Bird Cage" lightning arrester. The conductors are insulated or separated from the building by from 10 to 15 feet of air space. This method should be used at all points where the lightning is unusually severe. Unfortunately, in a majority of cases, it is not practical or possible to erect this type of arrester, and as very nearly as good protection is afforded with the conductors arranged as shown in Fig.30, Sheet J, and on Sheet A, this method may be followed unless the lightning hazard is unusually great.

General Instructions

In general there should be a maximum amount of metal, properly connected together in the network of lightning conductors, and a minimum amount of metal inside of the lookout house.

The furniture and other objects in the house should, as far as possible, be composed of wood or other nonmetallic substance.

A coal-oil stove should be used, as if wood stove is used the lightning hazard is greatly increased on account of the smoke and hot air from the chimney.

The telephone instruments should be located as far away as possible from a lightning conductor.

During an electrical storm the telephone line wire should be disconnected from the outside of the building and removed to a distance of 15 or 20 feet.

Occupants of a lookout house should, as far as is possible, keep in the center of the main floor of the house during an electrical storm.

All connections in the lightning conductors must be carefully made and should be gone over carefully at the beginning of the season - connections should be inspected and repainted with aluminum paint to prevent rust.

Ground

The best ground connection is made in moist soil. A copper plate about 3 feet square of 1/16" copper connected to the ground conductor and buried in permanently moist soil is the most reliable to use; but on account of the expense, etc., is not often practical. Thirty or forty feet of the end of a conductor cable coiled in a small bundle makes a very good substitute for the copper plate. Cover the cable or copper plate with a bushel or two of fine charcoal or coke. If there is moist soil within about 500 feet of the house,

extend each down conductor cable to it and make a ground as above described. If there is no soil within this distance carry each conductor cable one or two hundred feet over rocks away from the building, do up end in a coil and cover with charcoal or coke as before mentioned. A ground made this way should be composed of as much metal as is practical.

LUMBER LIST FOR LOOKOUT HOUSE

Lumber required in the different operations as shown in Figures 1, 2, 3, etc., pages 19 to 24.

Fig. No.1. Sills

| | | | | | |
|---------|---|-------------|----|--------------|-----|
| 1 Piece | $3\frac{1}{2}" \times 3\frac{1}{2}" \times 12'$ | Douglas Fir | #2 | clr. & Bttr. | S4S |
| 1 " | " " 14' | " | " | " " | " " |
| 2 " | " " 20' | " | " | " " | " " |
| 1 " | $1\frac{3}{4}" \times 6" \times 10'$ | " | " | " " | " " |

Fig. No.2 Joists

| | | | | | |
|------------|---|-------------|----|--------------|-----|
| 7 Pieces | $1\frac{1}{2}" \times 3\frac{1}{2}" \times 12'$ | Douglas Fir | #2 | Clr. & Bttr. | S4S |
| 36 Lin.ft. | $1\frac{1}{2}" \times 3\frac{1}{2}"$ | " | " | " " | " " |

Fig. No.3 Sub-floor

| | | | | | |
|-----------|---------------------------|-------------|----|--------------|---------|
| 11 Pieces | $1" \times 8" \times 12'$ | Douglas Fir | #2 | Clr. & Bttr. | Shiplap |
| 15 " | $1" \times 8" \times 8'$ | " | " | " " | " " |

Fig. No.4 Finished Floor

| | | | | | |
|-----------|---------------------------|-------------|----|--------------|----------------|
| 44 Pieces | $1" \times 4" \times 12'$ | Douglas Fir | #2 | Clr. & Bttr. | V. G. Flooring |
|-----------|---------------------------|-------------|----|--------------|----------------|

Figs. No.5 & 6 Main Floor Frame

| | | | | | |
|-----------|---|-------------|----|--------------|-----|
| 12 Pieces | $1\frac{1}{2}" \times 3\frac{1}{2}" \times 12'$ | Douglas Fir | #2 | Clr. & Bttr. | S4S |
| 8 " | $3\frac{1}{2}" \times 3\frac{1}{2}" \times 14'$ | " | " | " " | " " |
| 3 " | $1\frac{1}{2}" \times 3\frac{1}{2}" \times 14'$ | " | " | " " | " " |
| 6 " | $1\frac{1}{2}" \times 3\frac{1}{2}" \times 8'$ | " | " | " " | " " |
| 2 " | $1\frac{1}{2}" \times 3\frac{1}{2}" \times 14'$ | " | " | " " | " " |
| 2 " | " " 12' | " | " | " " | " " |
| 1 " | " " 3' | " | " | " " | " " |

Fig. No. 7 Main Floor Sheathing

| | | | | | |
|-----------|---------------------------|-------------|----|--------------|---------|
| 21 Pieces | $1" \times 8" \times 12'$ | Douglas Fir | #2 | Clr. & Bttr. | Shiplap |
| 14 " | $1" \times 8" \times 8'$ | " | " | " " | " " |

Fig. No. 8 Tower Joists and Floor

| | | | | | |
|----------|---|-------------|----|--------------|-----------------|
| 4 Pieces | $1\frac{1}{2}" \times 5\frac{1}{2}" \times 12'$ | Douglas Fir | #2 | Clr. & Bttr. | S4S) |
| 2 " | $1\frac{1}{2}" \times 3\frac{1}{2}" \times 12'$ | " | " | " " | " ") Joists |
| 11 " | $1" \times 4" \times 12'$ | " | " | " " | " V.G. Flooring |

Figs.No.9, 10, 11, 12 Tower Frame

| | | | | | |
|----------|--|-------------|----|--------------|-------------|
| 4 Pieces | $3\frac{1}{2}" \times 3\frac{1}{2}" \times 6'6"$ | Douglas Fir | #2 | Clr. & Bttr. | S4S) |
| 2 " | $3\frac{1}{2}" \times 3\frac{1}{2}" \times 12'$ | " | " | " " | " ") Posts |
| 2 " | $1\frac{1}{2}" \times 3\frac{1}{2}" \times 8'$ | " | " | " " | " " |
| 2 " | $3\frac{1}{2}" \times 5\frac{1}{2}" \times 12'$ | " | " | " " | " " |
| 1 " | $1\frac{1}{2}" \times 3\frac{1}{2}" \times 12'$ | " | " | " " | " " |

Figs. No. 9, 10, 11, 12 (Cont.)

| | | | | | | |
|---|-------|---|-------------|----|--------------|-----|
| 1 | Piece | $1\frac{1}{2}" \times 3\frac{1}{2}" \times 14'$ | Douglas Fir | #2 | Clr. & Bttr. | S4S |
| 2 | " | $2\frac{3}{4}" \times 3\frac{1}{2}" \times 12'$ | " | " | " | " |
| 1 | " | $1\frac{1}{2}" \times 3\frac{1}{2}" \times 22'$ | " | " | " | " |
| 1 | " | $1\frac{1}{2}" \times 3\frac{1}{2}" \times 8'$ | " | " | " | " |
| 2 | " | $1\frac{1}{2}" \times 3\frac{1}{2}" \times 14'$ | " | " | " | " |

Fig. No. 13 Roof Rafters

| | | | | | | |
|----|--------|---|-------------|----|--------------|-----|
| 14 | Pieces | $1\frac{1}{2}" \times 3\frac{1}{2}" \times 10'$ | Douglas Fir | #2 | Clr. & Bttr. | S4S |
| 2 | " | " 12' | " | " | " | " |
| 1 | " | $3\frac{1}{2}" \times 3\frac{1}{2}" \times 3'$ | " | " | " | " |

Fig. No. 14 Roof Sheathing

1400 ft. (B.M.) 1"x4" 12' and 14' lengths
 Douglas Fir #2 Clr. & Bttr. V. Ceiling

Figs. No. 15 & 16 Siding

| | | | |
|----|--------|------------|-----------------|
| 11 | Pieces | 1"x6"x10' | Fir Rustic "V" |
| 23 | " | " 12' | " " " |

Fig. No. 17 Main Cornice - Window Trim

| | | | | | | |
|---|--------|--|-------------|----|--------------|-----|
| 4 | Pieces | $\frac{3}{4}" \times 8" \times 14'$ | Douglas Fir | #2 | Clr. & Bttr. | S4S |
| 4 | " | $\frac{3}{4}" \times 7\frac{1}{4}" \times 8'$ | " | " | " | " |
| 2 | " | $\frac{3}{4}" \times 7\frac{1}{4}" \times 12'$ | " | " | " | " |
| 4 | " | $\frac{3}{4}" \times 3\frac{1}{8}" \times 12'$ | " | " | " | " |
| 4 | " | $\frac{3}{4}" \times 3\frac{1}{2}" \times 14'$ | " | " | " | " |
| 8 | " | 1" - 14' | " | " | 1/4 Round | |

Fig. No. 18 Tower Cornice

| | | | | | | |
|---|--------|--|-------------|----|--------------|-----|
| 6 | Pieces | $\frac{3}{4}" \times 3\frac{1}{2}" \times 14'$ | Douglas Fir | #2 | Clr. & Bttr. | S4S |
| 4 | " | 1" - 14' | " | " | 1/4 Round | |

Figs. No. 19 & 19A Window Sills

| | | | | | | | |
|---|-------|---|-----------|----|--------------|---------------|-----|
| 1 | Piece | $1\frac{3}{8}" \times 8\frac{1}{2}" \times 12'$ | Doug. Fir | #2 | Clr. & Bttr. | Bev. Wd. Sill | S4S |
| 3 | " | " 14' | " | " | " | " | " |
| 2 | " | $1\frac{3}{8}" \times 6" \times 14'$ | " | " | " | " | " |

Figs. No.20 & 20A Main Floor Window Trim & Casing

| | | | | | | |
|----|-------|----------------------------|-------------|----|--------------|-----|
| 1 | Piece | $\frac{3}{4}$ "x1 5/8"x6' | Douglas Fir | #2 | Clr. & Bttr. | S4S |
| 2 | " | " 12' | " | " | " | " |
| 5 | " | " 14' | " | " | " | " |
| 10 | " | $\frac{3}{4}$ "x1 3/8"x12' | " | " | " | " |
| 1 | " | $\frac{3}{4}$ "x3"x6' | " | " | " | " |
| 5 | " | " 14' | " | " | " | " |
| 1 | " | " 6' | " | " | " | " |
| 14 | " | " 12' | " | " | " | " |
| 5 | " | " 14' | " | " | " | " |
| 4 | " | $\frac{3}{4}$ "x4"x12' | " | " | " | " |
| 1 | " | $\frac{3}{4}$ "x3"x18' | " | " | " | " |
| 1 | " | $\frac{3}{4}$ "x4"x18' | " | " | " | " |
| 1 | " | $\frac{3}{4}$ "x5"x16' | " | " | " | " |
| 1 | " | $\frac{3}{4}$ "x6"x12' | " | " | " | " |
| 4 | " | 1/4 round 14' | " | " | " | " |

Figs. No.21 & 21A Tower Window Trim & Casing

| | | | | | | |
|---|--------|----------------------------|-------------|----|--------------|-----|
| 2 | Pieces | $\frac{3}{4}$ "x2 1/4"x12' | Douglas Fir | #2 | Clr. & Bttr. | S4S |
| 4 | " | $\frac{3}{4}$ "x1 5/8"x12' | " | " | " | " |

Fig. No.22 Door and Threshold

| | | | | | | |
|---|--------|----------------|-----------------|----|--------------|------------------|
| 3 | Pieces | 1"x6"x14' | Douglas Fir T&G | #2 | Clr. & Bttr. | "VG" Flooring |
| 1 | " | 1"x6"x14' | " | " | #2 | Clr. & Bttr. S4S |
| 1 | " | 1 1/2"x6"x3'6" | " | " | " | " |

Fig. No. 23 Tower Shutters

| | | | | | | |
|----|--------|----------------------------|-------------|---------|----|------------------|
| 14 | Pieces | $\frac{3}{4}$ "x7"x12' | Douglas Fir | Shiplap | | |
| 2 | " | $\frac{3}{4}$ "x3 1/2"x12' | " | " | " | |
| 3 | " | $\frac{3}{4}$ "x5 1/2"x12' | " | " | #2 | Clr. & Bttr. S4S |

Alternate for Ceiling

| | | | | | | |
|----|--------|-----------|----|--------------|----------|---------|
| 52 | Pieces | 1"x4"x12' | #2 | Clr. & Bttr. | "V & CW" | Ceiling |
|----|--------|-----------|----|--------------|----------|---------|

Fig. No.24 Ladder

| | | | | | | |
|---|-------|----------------------------|-------------|----|--------------|-----|
| 1 | Piece | 1 1/2"x3 1/2"x18' | Douglas Fir | #2 | Clr. & Bttr. | S4S |
| 1 | " | $\frac{3}{4}$ "x2 1/2"x10' | " | " | " | " |

Fig. No.25 Shelving

| | | | | | | |
|---|--------|---------------------------|-------------|----|--------------|-----|
| 3 | Pieces | $\frac{3}{4}$ "x11"x12' | Douglas Fir | #2 | Clr. & Bttr. | S4S |
| 1 | " | $\frac{3}{4}$ "x10"x10' | " | " | " | " |
| 2 | " | $\frac{3}{4}$ "x5 1/2"x8' | " | " | " | " |

Fig. No. 26 Stand for Fire Finder

| | | | | | |
|---|-------|--|----------------|--------------|-----|
| 1 | Piece | 1" ⁿ x 11" ⁿ x 6' | Douglas Fir #2 | Clr. & Bttr. | S4S |
| 1 | " | 1" ⁿ x 13" ⁿ x 2' | " | " " " | " " |
| 1 | " | $\frac{3}{4}$ " ⁿ x 3 $\frac{1}{2}$ " ⁿ x 6' | " | " " " | " " |
| 1 | " | $\frac{3}{4}$ " ⁿ x 2" ⁿ x 14' | " | " " " | " " |
| 1 | " | 1 $\frac{1}{2}$ " ⁿ x 3 $\frac{1}{2}$ " ⁿ x 2' | " | " " " | " " |

Fig. No. 32 Lower Floor Shutters

Shutters for 7 corner windows

| | | | | | |
|----|--------|---|----------------|--------------|-----------------|
| 10 | Pieces | 1" x 6" x 16' | Douglas Fir #2 | Clr. & Bttr. | T&G VG Flooring |
| 4 | " | $\frac{3}{4}$ " ⁿ x 5 $\frac{1}{2}$ " ⁿ x 14' | " | " " " | S4S |

Shutters for 8 center windows

| | | | | | |
|----|--------|---|----------------|--------------|-----------------|
| 11 | Pieces | 1" x 6" x 16' | Douglas Fir #2 | Clr. & Bttr. | T&G VG Flooring |
| 1 | " | 1" x 6" x 6' | " | " " " | " " " |
| 4 | " | $\frac{3}{4}$ " ⁿ x 5 $\frac{1}{2}$ " ⁿ x 14' | " | " " " | S4S " " |

Fig. No. 31 Shutter Buttons

| | | |
|----|--|-------------------------------|
| 90 | $\frac{3}{4}$ " ⁿ x 3" ⁿ | Hardwood buttons (per detail) |
|----|--|-------------------------------|

Fig. No. 30A Cleats for Lightning Conductors

| | | |
|-----|--|------------------------------|
| 100 | $\frac{3}{4}$ " ⁿ x 3" ⁿ | Hardwood cleats (per detail) |
|-----|--|------------------------------|

Fig. No. 33 Blocks under Main Floor Window Sill

| | | |
|----|---|------------------------------|
| 35 | 1 $\frac{1}{4}$ " ⁿ x 3 $\frac{1}{2}$ " ⁿ | Hardwood Blocks (per detail) |
|----|---|------------------------------|

Extras - Miscellaneous Operation

| | | | | | |
|---|--------|---|----------------|--------------|------------------|
| 3 | Pieces | 1 $\frac{1}{2}$ " ⁿ x 3 $\frac{1}{2}$ " ⁿ x 14' | Douglas Fir #2 | Clr. & Bttr. | S4S |
| 1 | " | $\frac{3}{4}$ " ⁿ x 11" ⁿ x 7' | " | " " " | " " |
| 1 | " | 1" x 4" x 14' | " | " " " | V & CV Ceiling |
| 1 | " | 5/8" x 5" x 7' | " | " "V" | Rustic |
| 1 | " | 1" x 4" x 14' | " | " #2 | Clr. & Bttr. S4S |

TOTAL AMOUNT OF LUMBER REQUIRED

Summary - Lumber List

| Pcs.: | Size | Length: | Description | Ft. B.M. |
|---------|--------------------------------------|---------|---------------------------------|----------|
| 3 | 3 $\frac{1}{2}$ "x3 $\frac{1}{2}$ "n | 12' | Douglas Fir #2 Clr. & Bttr. S4S | 48 |
| 9 | " | 14 | " " " " | 168 |
| 4 | " | 6'6" | " " " " | 35 |
| 1 | " | 3' | " " " " | 4 |
| 2 | " | 20 | " " " " | 53 |
| 1 | 1 $\frac{3}{4}$ "x6"n | 10 | " " " " | 13 |
| 26 | 1 $\frac{1}{2}$ "x3 $\frac{1}{2}$ "n | 12 | " " " " | 208 |
| 11 | " | 14 | " " " " | 103 |
| 9 | " | 8 | " " " " | 48 |
| 1 | " | 3 | " " " " | 2 |
| 14 | " | 10 | " " " " | 93 |
| 1 | " | 22 | " " " " | 15 |
| 1 | " | 18 | " " " " | 12 |
| | " | 38 | " " " " | 25 |
| 32 | 1x8 | 12 | " " " Shiplap | 256 |
| 29 | " | 8 | " " " " | 155 |
| 55 | 1x4 | 12 | " " " "VG" Floor'g: | 220 |
| 4 | 1 $\frac{1}{2}$ "x5 $\frac{1}{2}$ "n | 12 | " " " S4S | 48 |
| | 1x4 | 12x14 | " 1400 lin.ft." "V" Ceiling | 467 |
| 11 | 1x6 | 10 | " Fir "V" Rustic | 55 |
| 1 | " | 7 | " " " " | 4 |
| 23 | " | 12 | " " " " | 138 |
| 4 | 3"n x8"n | 14 | " " #2 Clr. & Bttr. S4S | 47 |
| 4 | "7 $\frac{1}{2}$ "n | 8 | " " " " | 21 |
| 2 | " | 12 | " " " " | 16 |
| 4 | "3/8"n | 12 | " " " " | 4 |
| 10 | "3 $\frac{1}{2}$ "n | 14 | " " " " | 47 |
| 2 | "2 $\frac{1}{2}$ "n | 12 | " " " " | 6 |
| 6 | "1 5/8"n | 12 | " " " " | 12 |
| 1 | " | 6 | " " " " | 1 |
| 5 | " | 14 | " " " " | 12 |
| 10 | "1 3/8"n | 12 | " " " " | 20 |
| 2 | "3"n | 6 | " " " " | 2 |
| 10 | " | 14 | " " " " | 12 |
| 14 | " | 12 | " " " " | 14 |
| 4 | "4"n | 12 | " " " " | 20 |
| 1 | "3 $\frac{3}{4}$ "n | 18 | " " " " | 6 |
| 1 | "4 $\frac{1}{2}$ "n | 18 | " " " " | 7 |
| 1 | "5 $\frac{1}{2}$ "n | 16 | " " " " | 8 |
| 1 | "6"n | 12 | " " " " | 8 |
| 12 | 1" | 14 | " " 1/4 Round | 14 |
| 1 | 1 3/8"n x8 $\frac{1}{2}$ "n | 12 | " " Bev. window sill | 20 |
| 3 | " | 14 | " " " " | 70 |
| Forward | | | | 2537 |

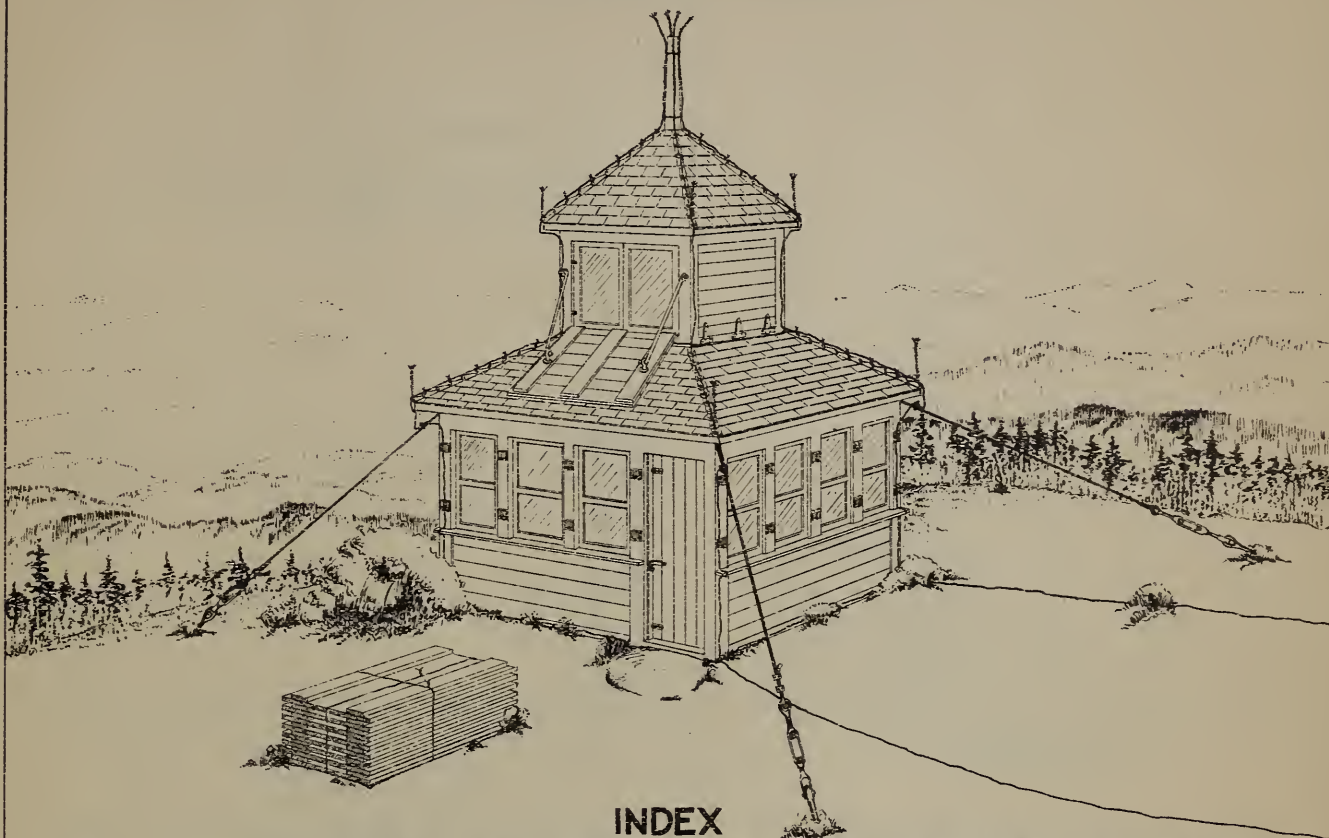
| Pcs.: | Size | Length: | Description | Ft. B.M. |
|--------------|---------------------|---------|---|----------|
| | | | Forwarded | 2537 |
| 2 | 1 3/8" x 6" n | 14' | Douglas Fir, Bev. Window Sill | 54 |
| 3 | 1x6 | 14 | " " T&G #2 Clr. & Bttr. VG Floor. | 21 |
| 21 | " | 16 | " " " " " " | 168 |
| 1 | " | 6 | " " " " " " | 3 |
| 1 | 1" n x 6" n | 14 | " " #2 Clr. & Bttr. S4S | 9 |
| 1 | 1 1/2" n x 6" n | 3'6" | " " " " " | 5 |
| 14 | 3/4" n x 7" n | 12 | " " Shiplap | 112 |
| 2 | x 3 1/2" n | 12 | " " " | 8 |
| 3 | x 5 1/2" n | 12 | " " #2 Clr. & Bttr. S4S) | 18 |
| or alternate | | | | |
| 52 | 1x4 | 12 | Douglas Fir, #2 Clr. & " V and CV Ceiling | 208 |
| 1 | 3/4" n x 2 1/2" n | 10 | Douglas Fir, #2 Clr. & Bttr. S4S | 3 |
| 3 | x 1 1/2" n | 12 | " " " " " | 36 |
| 1 | x 10" n | 10 | " " " " " | 10 |
| 2 | x 5 1/2" n | 8 | " " " " " | 8 |
| 8 | x 5 1/2" n | 14 | " " " " " | 56 |
| 1 | 1" n x 11" n | 6 | " " " " " | 6 |
| 1 | x 13" n | 2 | " " " " " | 2 |
| 1 | 3/4" n x 3 1/2" n | 6 | " " " " " | 2 |
| 1 | x 2" n | 14 | " " " " " | 3 |
| 1 | x 11" n | 7 | " " " " " | 7 |
| 1 | 1x4 | 14 | " " " " V&CV Ceil. | 5 |
| 1 | " | 14 | " " " " S4S | 5 |
| 90 | 3/4" n x 3" n | | Hardwood Buttons (per detail) |) |
| 100 | " | | Cleats " " |) 24 |
| 35 | 1 1/2" n x 3 1/2" n | | Blocks " " |) |
| Total | | | | 3310 |

Total weight, approx. 7,000 lbs.

NOTE: If ceiling is used for shutters instead of shiplap, total will be about 3,360 ft.

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READY CUT LOOKOUT HOUSE



INDEX

| FIG.NO. | DESCRIPTION-SHEET LETTER- ON BLUE PRINT | PAGE NO.ON CUTTING LIST | FIG.NO. | DESCRIPTION-SHEET LETTER- ON BLUE PRINT | PAGE NO.ON CUTTING LIST |
|----------|--|----------------------------|---------|--|----------------------------|
| 1 | FLOOR SILLS & LEVELS | B --- 5 | 21 | TOWER FLOOR PLAN | F --- 8 |
| 2 | FLOOR JOIST | B --- 5 | 22 | DETAIL OF DOOR | F --- 9 |
| 3 | SUB FLOORING | B --- 5 | 22-A | DETAIL OF THRESHOLD | F --- 9 |
| 4 | FINISHED FLOORING | B --- 5 | 23 | DETAIL OF TOWER SHUTTER | F --- 9 |
| 5-6 | FRAMING ELEVATIONS | C --- 5 | 23-A | TOWER SHUTTER FASTENER | F --- 12 |
| 7 | SHEATHING ELEV. | C --- 6 | 24 | LADDER | F --- 10 |
| 8 | TOWER JOIST-FLOORING & LADDER LOCATION | C --- 6 | 25 | PLAN OF SHELVING | I --- 10 |
| 9-10-11 | TOWER BRACES | C --- 6 | 26 | DETAIL OF FINDER STAND | I --- 10 |
| 12-12-B | TOWER FRAME & DETAILS OF FLASHINGS | D --- 6 | 27 | DETAIL OF ANCHOR RODS | I --- 11 |
| 13 | RAFTERS | D --- 6 | 28 | ANCHOR CABLE FASTENING | I --- 11 |
| 14 | SHEATHING & SHINGLES | D --- 7 | 29 | TURNBUCKLE & ANCHOR ROD | I --- 12 |
| 15-16 | SIDING ELEVATIONS | D --- 7 | 30 | LIGHTNING PROTECTION | J --- 10 |
| 17 | DETAIL OF MAIN CORNICE | E --- 7 | 31-31A | BUTTONS FOR FASTENING SHUTTERS | K --- 10 |
| 18 | DETAIL OF TOWER " | E --- 7 | 32 | LOWER FLOOR WINDOW SHUTTERS | K --- 9 |
| 19-A-B-C | WINDOW SILL DETAILS | E --- 8 | 33 | BLOCKS UNDER LOWER FLOOR WINDOW SILLS | K --- 9 |
| 19-D | BLOCK UNDER TOWER WINDOW SILLS | E --- 8 | 34 | CORNER IRON SUPPORTING GUY CABLES | -K - 11 |
| 20 | TOWER FLOOR PLAN SHOWING WINDOWS | F --- 8 | 35 | BEDSTEAD | L - 15 |
| | | | 36 | TABLE | L - 15 |

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Portland, Ore.
Dec.-1921 - C.V.H.

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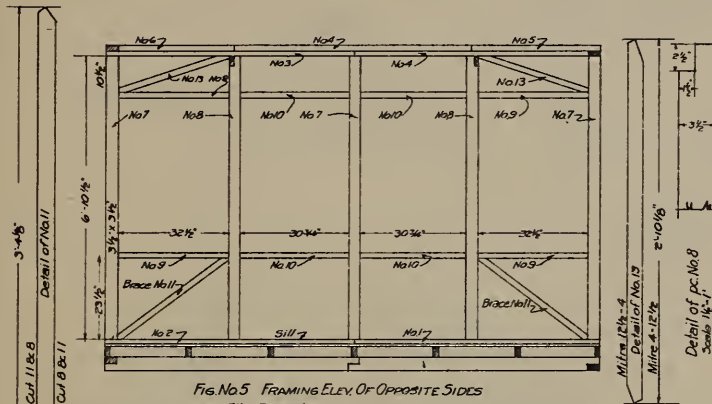


Fig. No. 5 Framing Elev. Of Opposite Sides
5th Operation
Material Marked Fig 5 Pcs 1 to 13

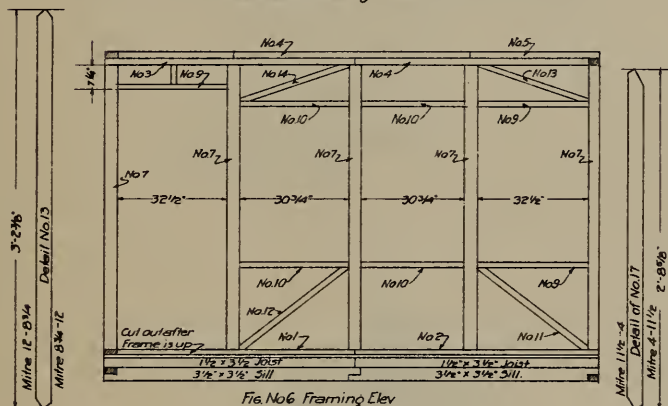


Fig. No. 6 Framing Elev
5th Operation Scale 1/2"=1ft.
Material Marked Fig 6 Pcs 1 to 14.

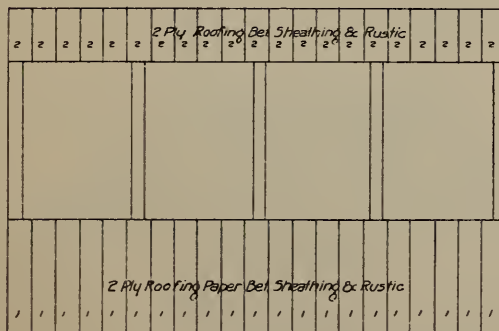


Fig. No. 7 Sheathing Elevations
6th Operation Scale 1/2"=1ft.
Material Marked Fig 7 Pcs 1 & 2

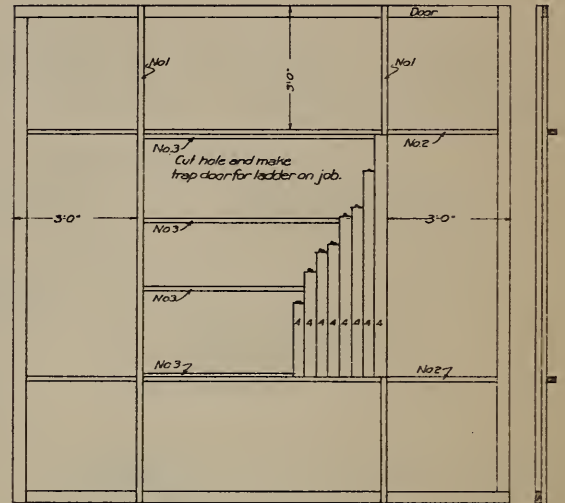


Fig. No. 8 Tower Joists
7th Operation Mark Fig 8 Pcs 1 to 4

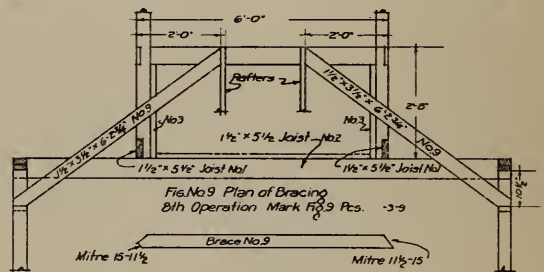


Fig. No. 9 Plan of Bracing
8th Operation Mark Fig 9 Pcs. 1 to 3

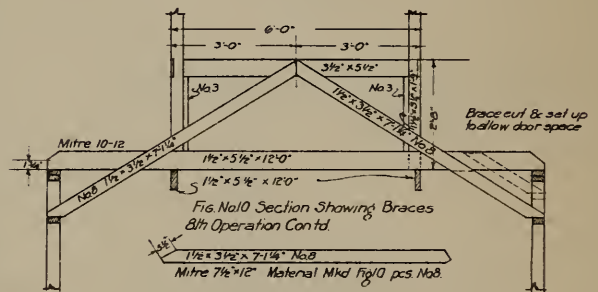
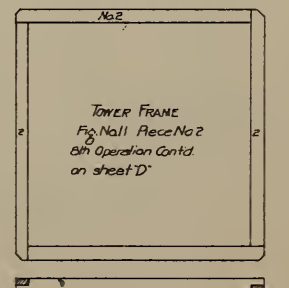
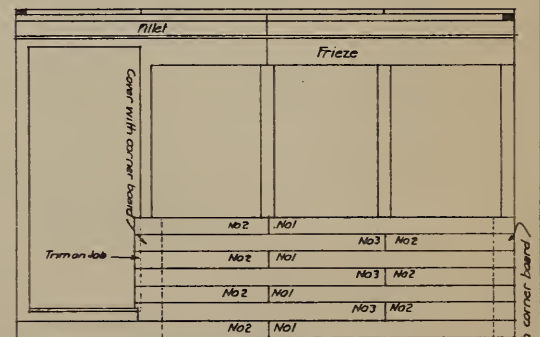
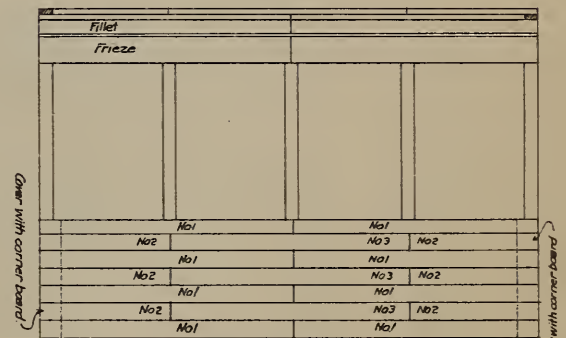
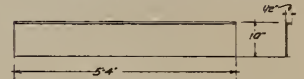
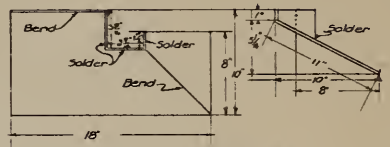
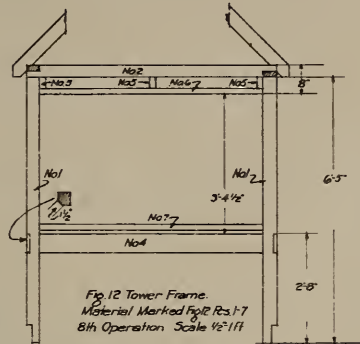
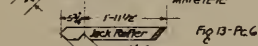
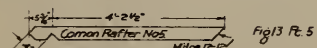
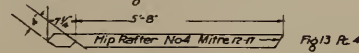
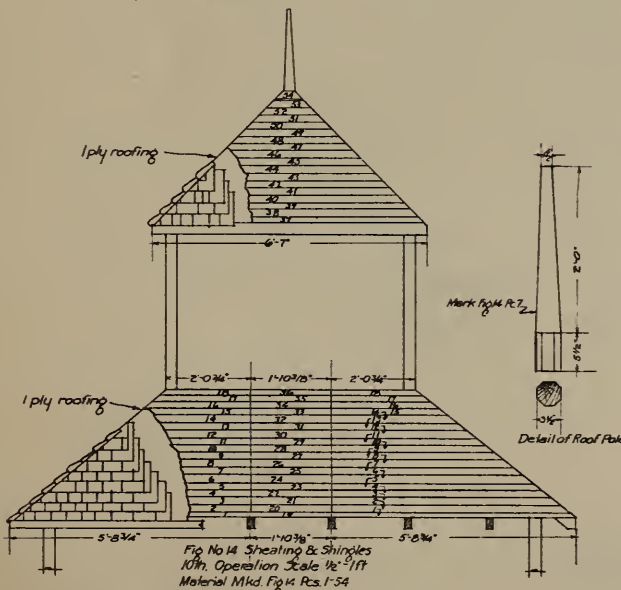
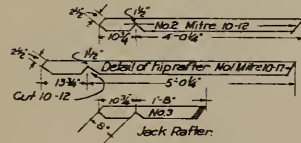
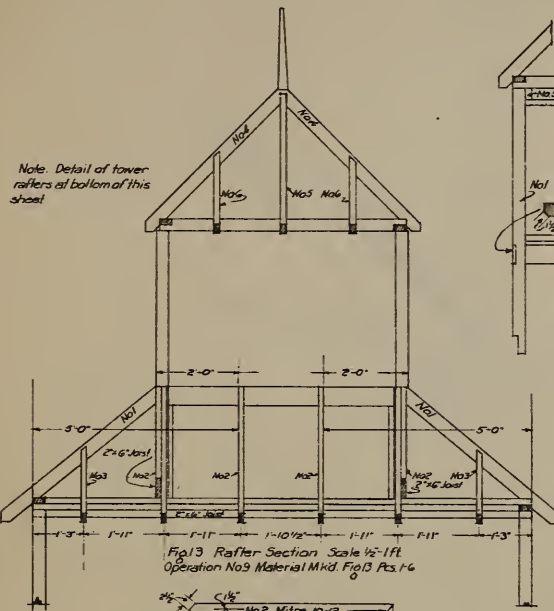


Fig. No. 10 Section Showing Braces
8th Operation Contd.



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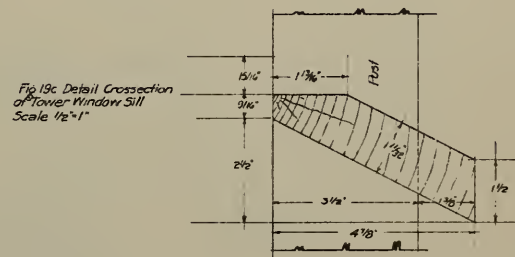
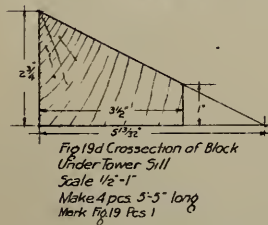
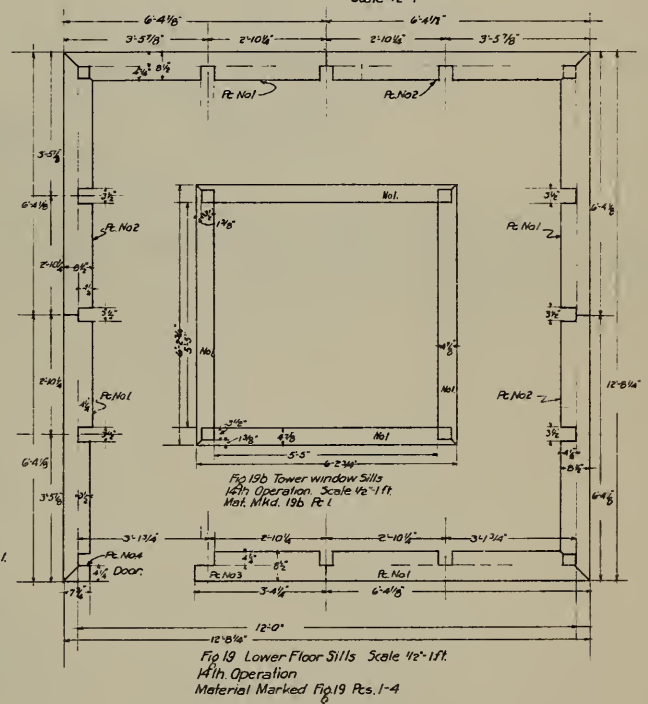
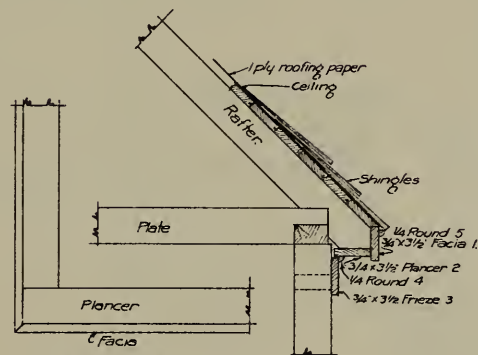
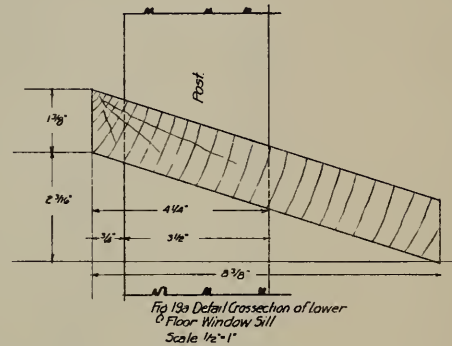
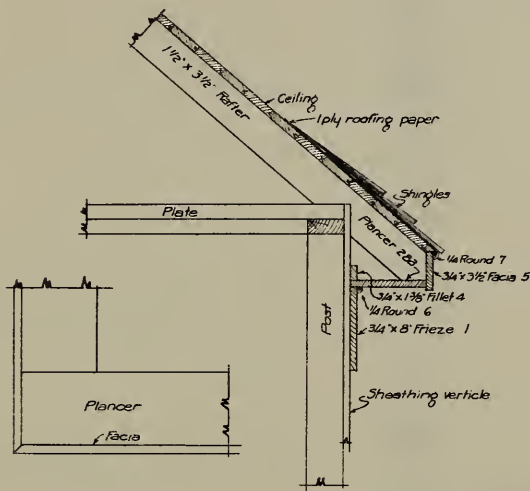
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Note: Use extra piece of shiplap under rustic and at side of door as filler Marked Fig. 16 Pt. No. 4

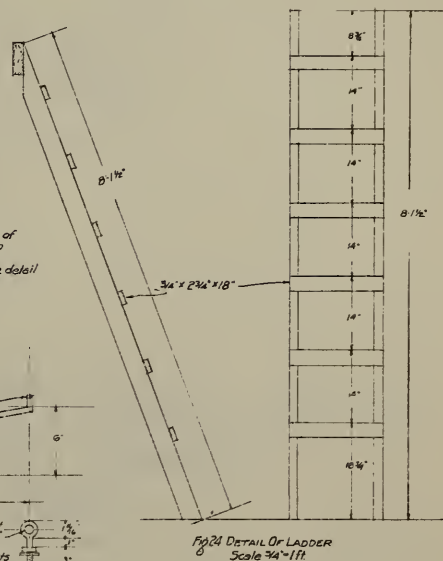
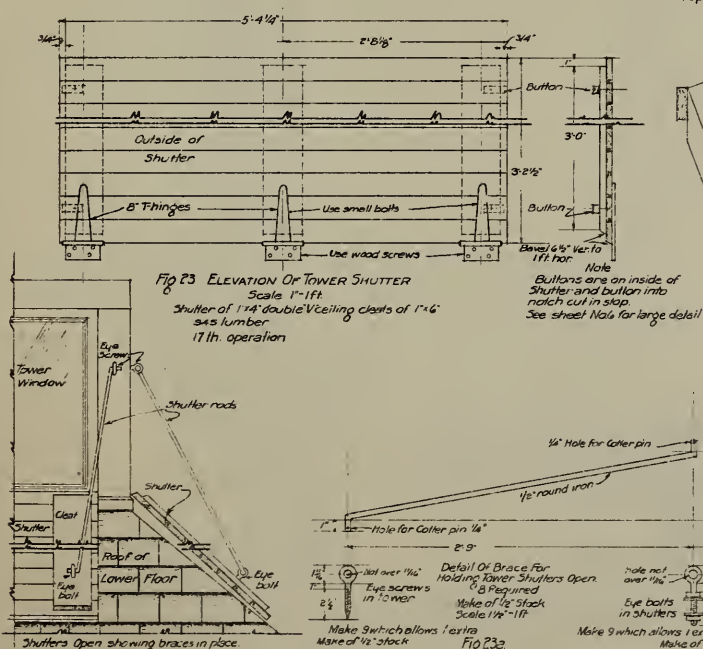
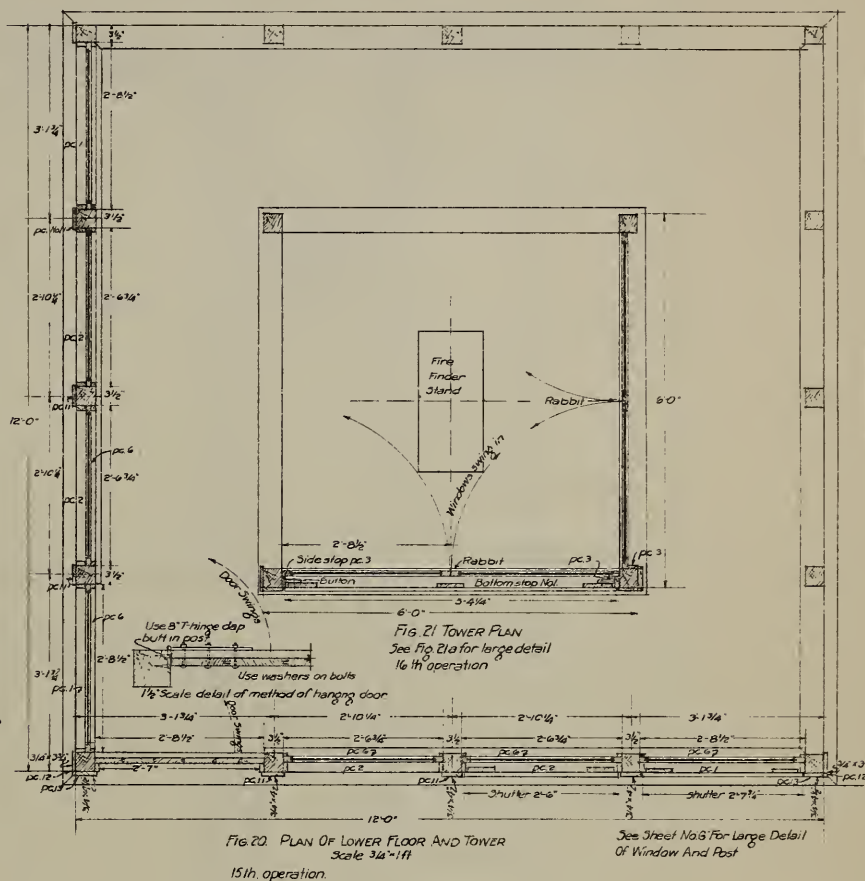
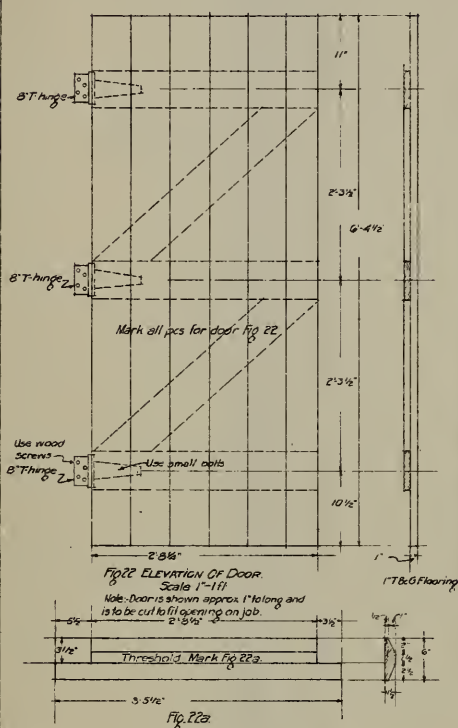
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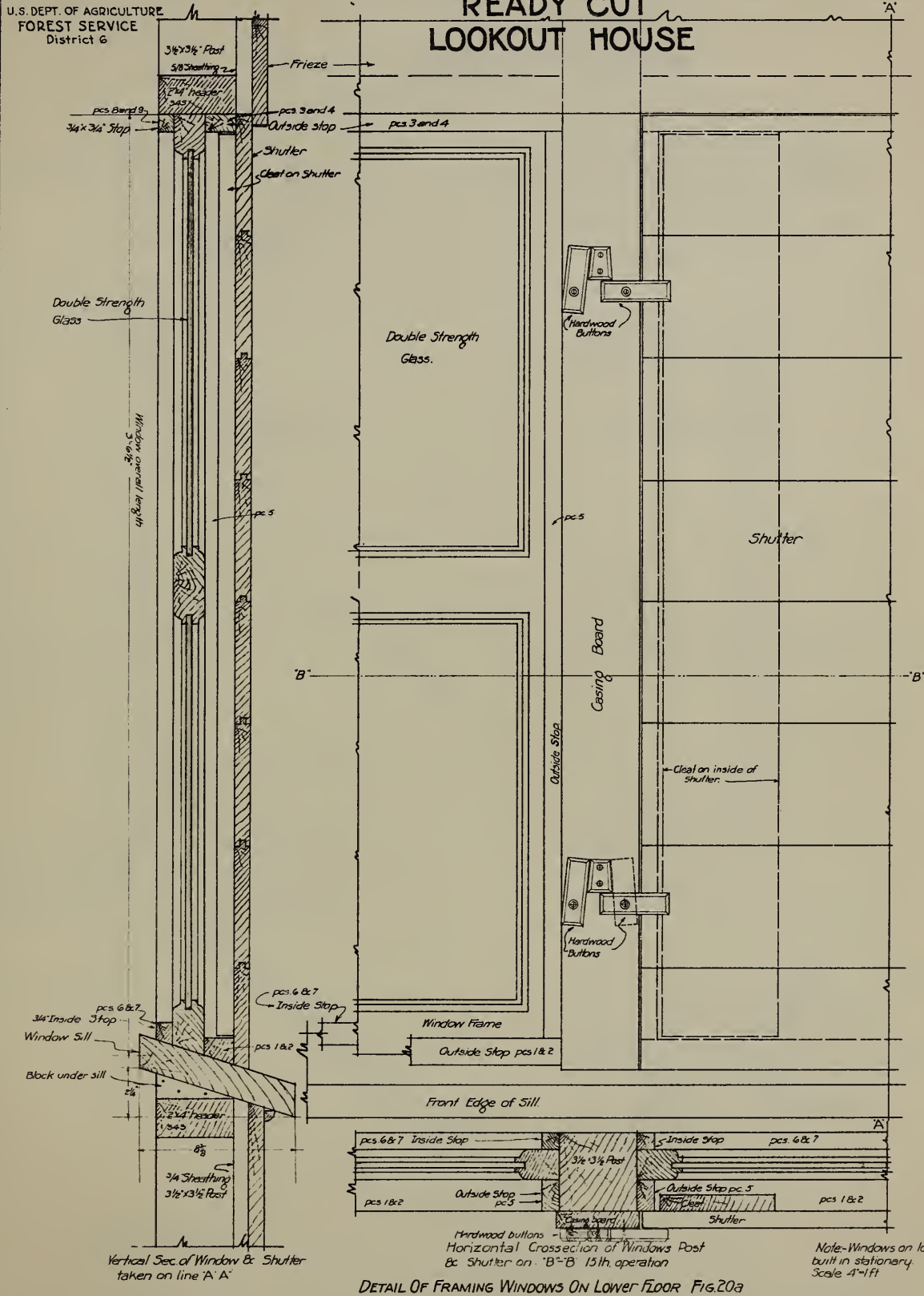
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District 6

READ LOOKOUT

Labels in the diagram include:

- $\frac{1}{8} \times \frac{3}{4}$ Ceiling
- Roof
- Shingles 4" to weather
- Building paper bet. shingles & ceiling boards
- $\frac{1}{2} \times \frac{3}{4}$ Reafter
- $\frac{3}{2} \times \frac{3}{2}$ Tower frame
- $\frac{3}{2} \times \frac{3}{2}$ post
- $\frac{5}{8}$ round
- $\frac{3}{4} \times \frac{3}{2}$ Fascia
- $\frac{3}{4} \times 3$ Plancer
- $\frac{3}{4} \times 4$ Frieze
- $\frac{1}{2} \times \frac{3}{4}$ header
- Hinge
- Window frame
- $\frac{3}{4} \times \frac{1}{2}$ Stop pc. 2
- Opening cut in stop button hinges into this notch
- Hardwood button fastened to cleat on shutter
- Shutter
- $\frac{3}{4} \times 4 \frac{1}{2}$ Cleat
- $\frac{1}{4} \times \frac{3}{4}$ double V ceiling
- Shutter swings open thus being hinged to sill
- 'B'
- Window swings in
- Notch cut in stop to receive button
- End view of button
- Hinge bolted to shutter & fastened to sill with screws
- Stop $\frac{3}{4} \times 2$ " bevel edges pc Nail
- $\frac{1}{4}$ " ver. to $\frac{3}{8}$ " hor.
- Window sill see detail sheet No E Fig 13c
- $\frac{3}{8} \times 1$ " Drip strip
- Hinge
- Flashing bent up $\frac{1}{2}$ " and tacked to sill
- Block under sill
- Flashings
- $\frac{3}{2} \times \frac{5}{2}$ Tower frame
- $\frac{3}{2} \times \frac{3}{2}$ post
- $\frac{1}{4} \times \frac{3}{4}$ Ceiling
- Roof
- Shingles 4" to weather
- Building paper bet. shingles and ceiling boards
- $\frac{1}{2} \times \frac{3}{4}$ Reafter
- Heavy dashed line indicates building paper

Crosssection of tower window
taken on "A" "A" Vertical
Scale 4"-1ft All dimensions net

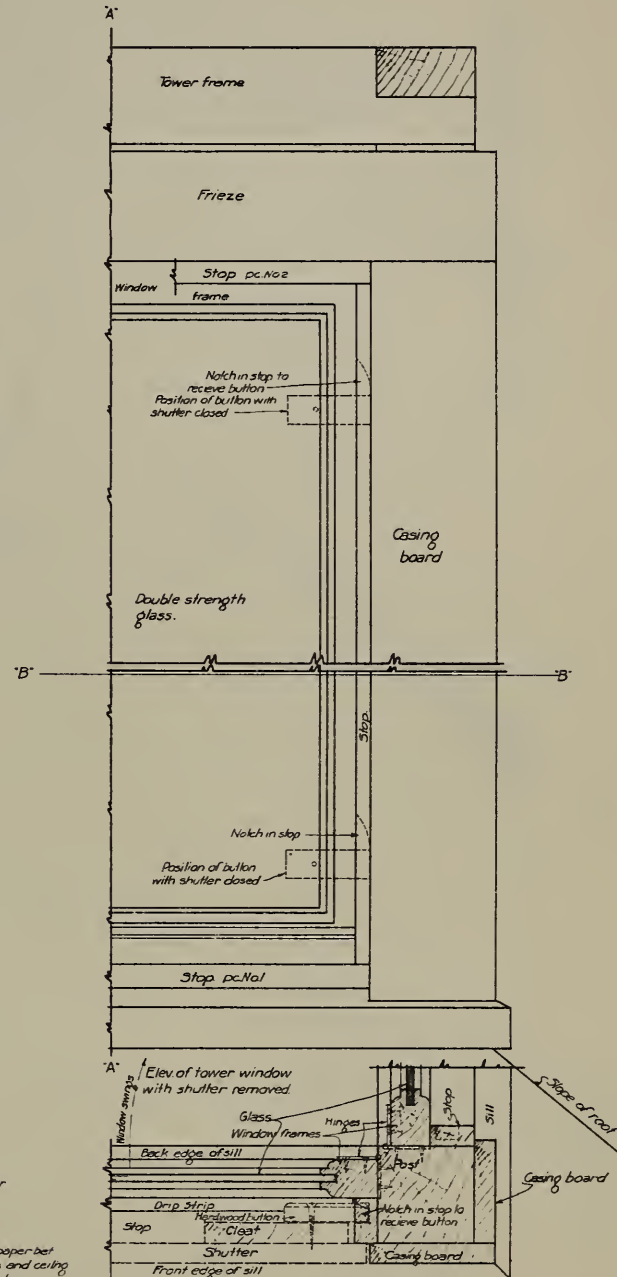


Fig 21a. DETAIL OF TOWER WINDOWS
16th operation cycle

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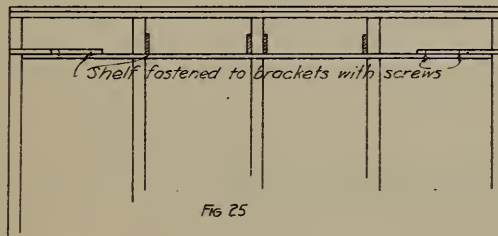
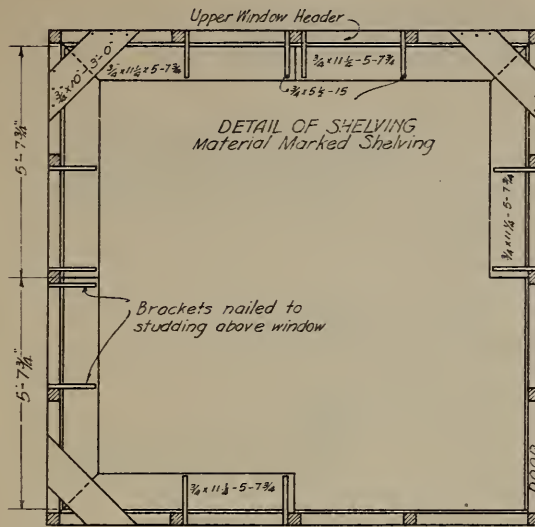
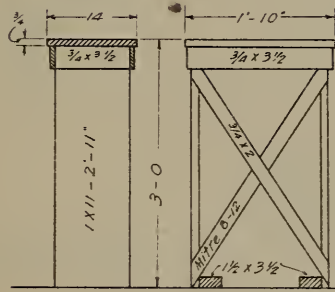


FIG 25



STAND FOR FIRE FINDER
Material Marked Fire Finder
To be in center of Tower Floor

FIG 26

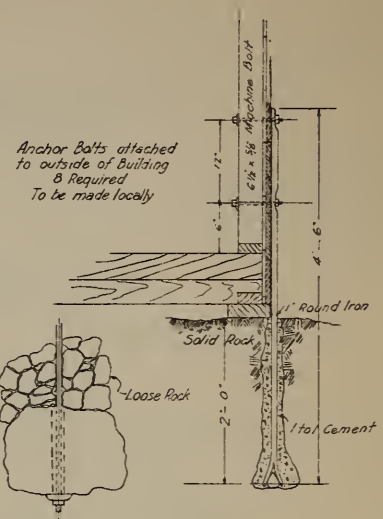


FIG 27

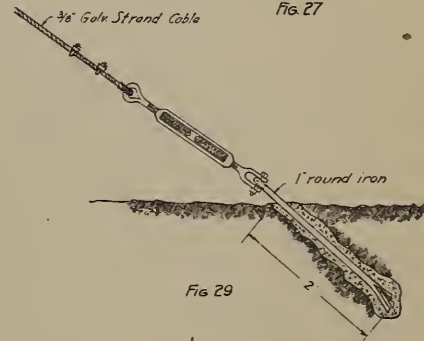


FIG 29

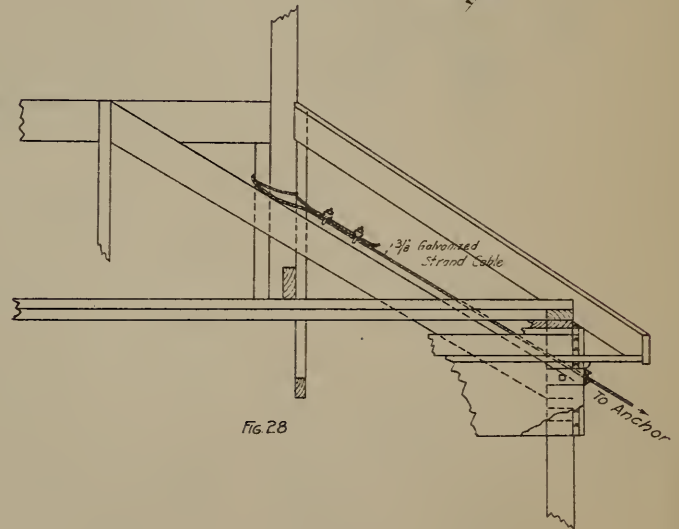


FIG 28

C. M. Allen
Portland, Ore.
Dec. 1921- CVH.

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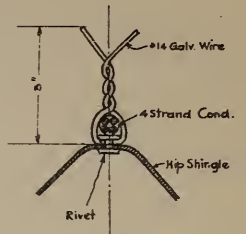
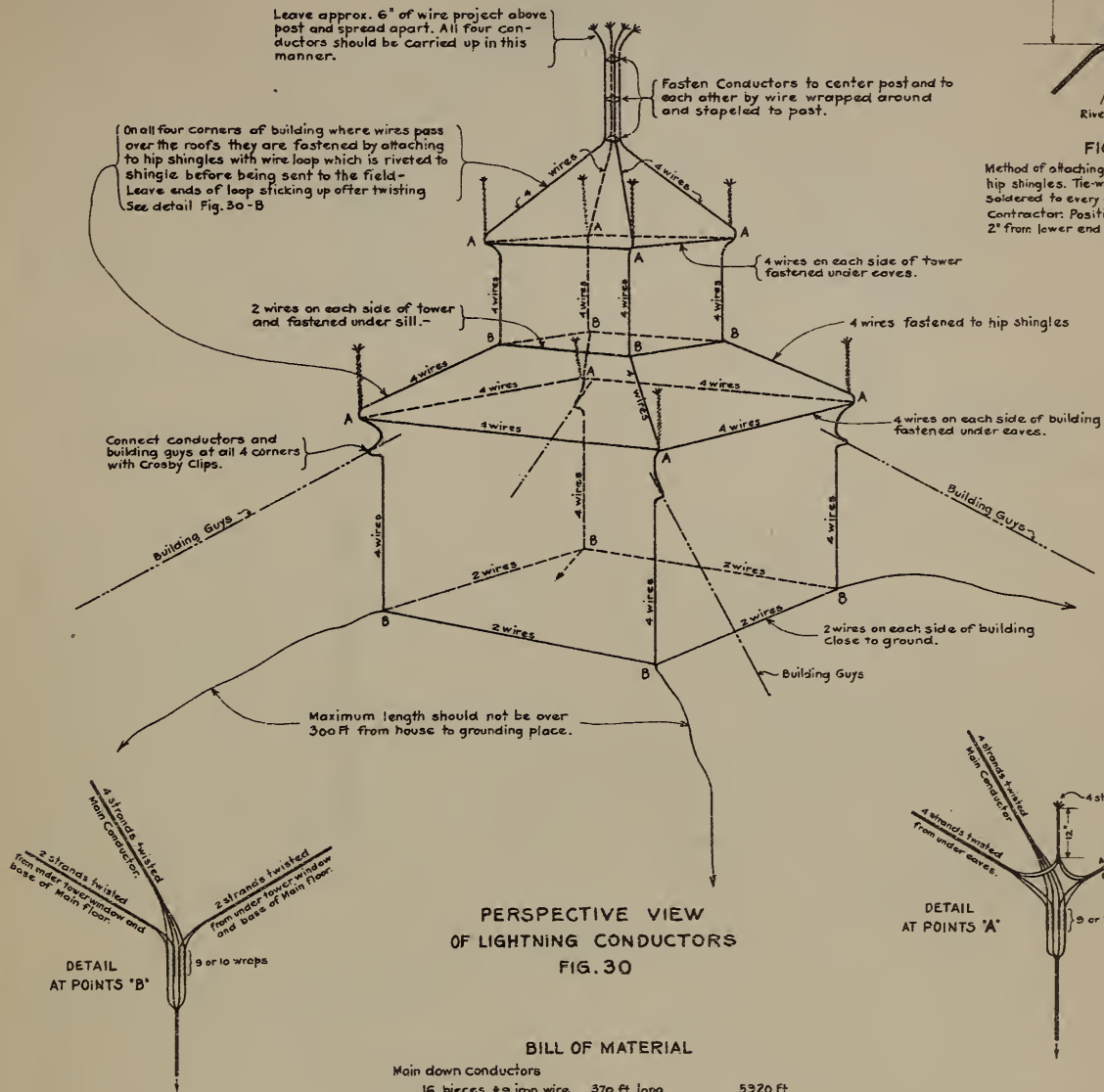
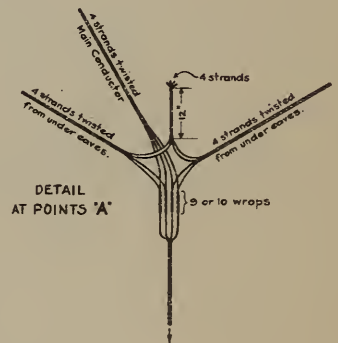


FIG. 30-B

Method of attaching lightning conductor to hip shingles. Tie wire to be riveted and soldered to every other shingle by contractor. Position of rivet hole abt. 2" from lower end of shingle.



DETAIL AT POINTS 'A'

PERSPECTIVE VIEW
OF LIGHTNING CONDUCTORS
FIG. 30

BILL OF MATERIAL

| | | |
|---|-------------|----------|
| Main down conductors | | |
| 16 pieces #9 iron wire | 370 ft long | 5920 Ft. |
| Horizontal conductor around tower under tower window | | |
| 16 pieces #9 iron wire | 9 ft. long | 144 Ft. |
| Horizontal conductor around | | |
| 8 pieces #9 iron wire | 9 ft. long | 72 Ft. |
| Horizontal conductor around Main floor roof under eaves | | |
| 16 pieces #9 iron wire | 16 ft. long | 256 Ft. |
| Horizontal conductor around bottom of Main floor. | | |
| 8 pieces #9 iron wire | 16 ft. long | 128 Ft. |
| Total wire | | 6520 Ft. |

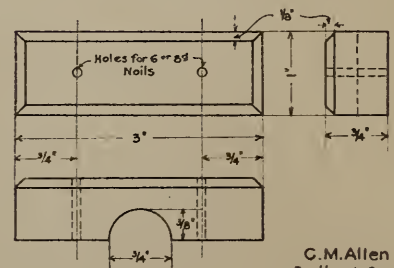
Notes:-

Twist all strands with nail after conductors are in place so that all wires are in close contact with each other. This should be thoroughly done on all sides.

Ground is made by coiling approx. 30 or 40 ft. of end of 4 strand conductor and covering with charcoal or coke in case of rock ground. For ground in soil bury coil and cover with charcoal or coke.

A wood stove is not recommended. If such is used in house a galvanized roof jack should be used and should be bonded securely to conductor with not less than four strands of #9 iron wire, twisted.

DETAIL OF BLOCK FOR FASTENING CONDUCTOR FIG. 30-A



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Jan. 6 - 1922 - G.V.H.

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Full Size Detail of Shutter fastenings

For Use of Above See Sheet No. G for lower floor, and Sheet No. H for Tower.

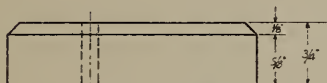
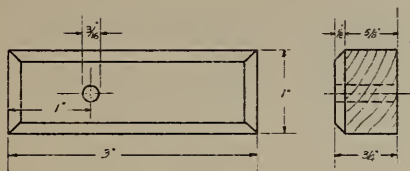
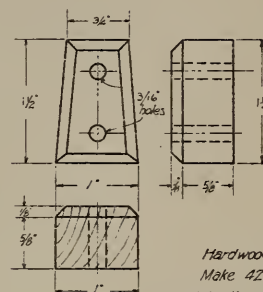


Fig. 31 Full Size Detail of Button

Make 90 for Each house which allows
6 Extras.



Hardwood Block to Be used with Buttons
Make 42 blocks for each house
Which allows 4 Extras.
This type of block used on lower floors only.

Fig. 31a

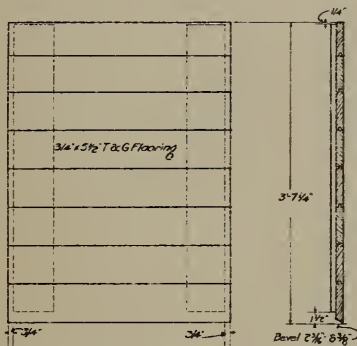


Fig. 32 Lower Floor Shutters

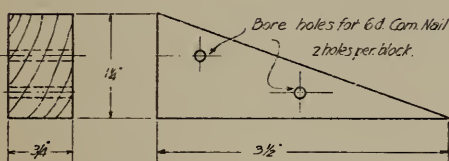


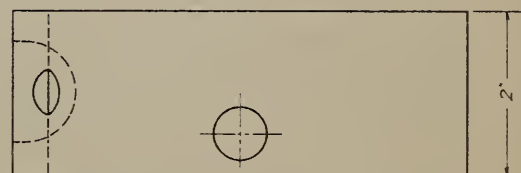
Fig. 33

Hardwood block fits under window sill and on top of headers.
This block supports sill and determines its pitch and requires
the top of all headers to be the same elevation.

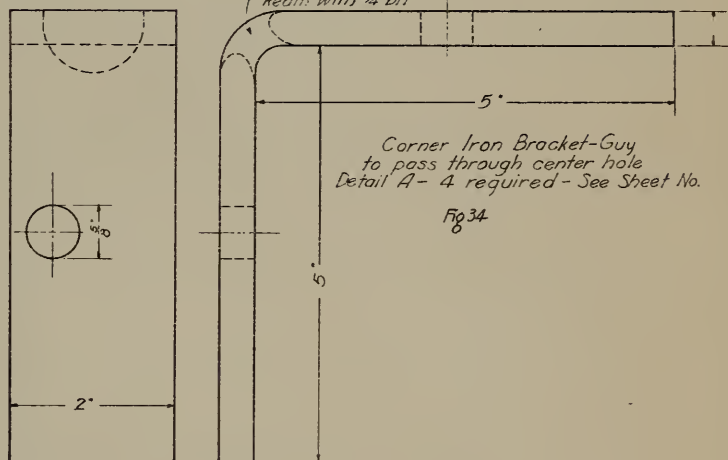
Nail block on each side of posts except at doorway.

Make 35 blocks which allows 5 Extras.

For position of this block See Sheet No. block under sill, lower floor.



1/2" Hole
Ream with 3/4" bit



Corner Iron Bracket-Guy
to pass through center hole
Detail A- 4 required - See Sheet No.

Fig. 34

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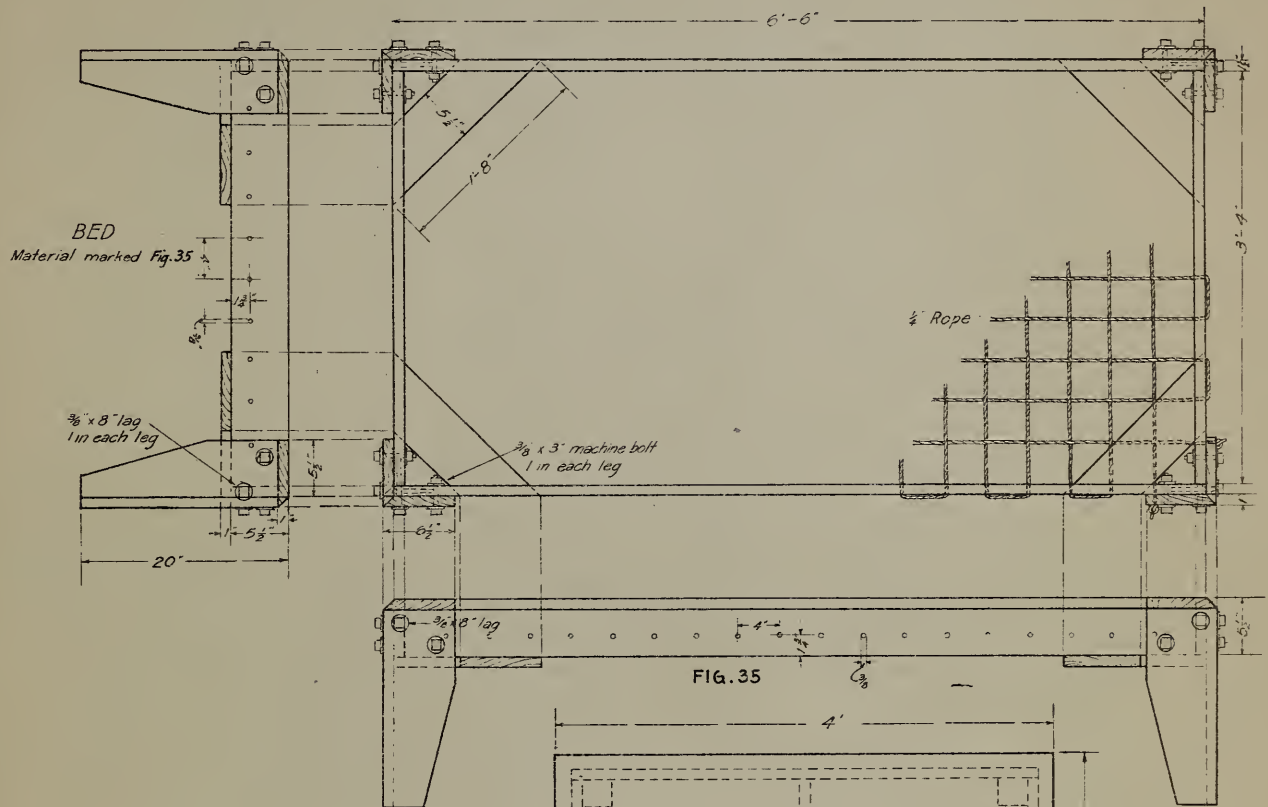
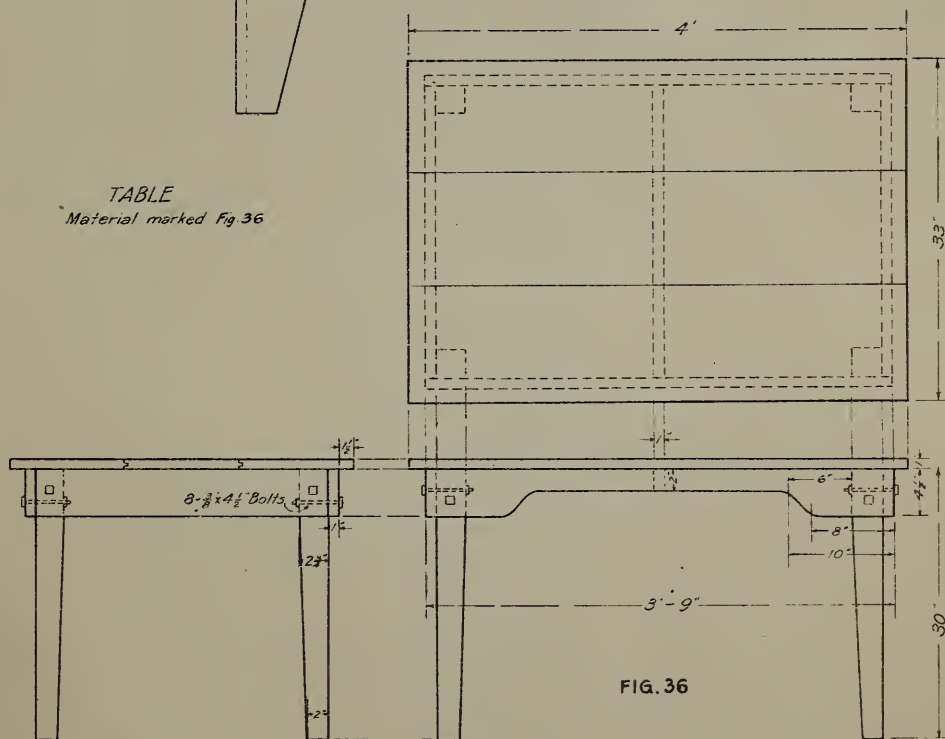


TABLE
Material marked Fig. 36



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Portland, Ore
Jan 3 - 1922
P.H.F.

